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BALTIMORE, NOVEMBER 10, 1910.

UNQUALIFIED.

The jury de lunatico inquirendo has
given its verdict.

FAITH BY WORKS.

Congratulations to New Orleans on
the vote of Louisiana in favor of a bond
issue of \$6,500,000 by the State for the
proposed Panama Exposition.

TO ADVERTISE THE SOUTH?

Right now is the neglected chance of
the "Southern Commercial Congress" to
get another letter from Theodore Roose-
velt to be published "from the Rio
Grande to Hudson Bay" and all at the
small price of "less than \$100—travel-
ing expenses of a representative."

UNDISMAYED.

Almost before opportunity was given
for sympathy with the Macon *Daily*
Telegraph in the disaster that came to
it last week it made occasion for con-
gratulations upon its enterprise in con-
tinuing publication. That and the
neighborliness of the Macon *News* are
fine instances of the spirit dominating
leading Southern newspapers.

THE JOY OF DOING.

The very dignity of Hubert Latham's
record-making flight over Baltimore city
on Monday indicated clearly that the
aviator must have shared with the
hundreds of thousands of spectators the
joy in his achievement, regardless of
the \$5000 prize which the record-making
newspaper enterprise of the Baltimore
Sun offered him for the benefit of the
people of the city.

ENOUGH.

Eight years of agitation; eight years
of denunciation of everybody who dif-
fered in opinion; eight years of bossing
or bulldozing or discrediting the courts;
eight years of turmoil and uncertainty
in business; eight years of effort in sow-
ing the dragon's teeth of hate and sus-
picion between employers and employes,
between the so-called classes and the
masses; eight years of undignified ac-
tivity in creating an Ananias Club and
conspiring to it all who dared to cross
his path are ended.

Let's get down to business; let's stop
fighting and snarling and go to work;
let's consign the demagogues to the gen-
tle shades of oblivion, and with broader
vision than ever of our country, our
people, our potentialities, move forward
for the greatest development era in our
history.

Let us seek prosperity; let us rejoice
in the boundless resources of our coun-
try; let us develop our latent wealth to
the utmost of our ability, and say to
the demon of hatred evoked by agi-
tators which has ruled the land of late
years, "Get thee behind me, Satan."

SOUTH'S LUMBER CUT.

The South is now cutting more than
half the lumber produced in the United
States. Since 1880 more than \$45,000,-
000,000 feet board measure of lumber
has been cut, and of the total more than
294,000,000,000 feet has been cut in the
South, the cut by States in the thirty
years having been: Alabama, 23,-
623,000,000; Arkansas, 29,689,000,000;
Florida, 17,573,000,000; Georgia, 24,966,-
000,000; Kentucky, 16,050,000,000; Loui-
siana, 29,235,000,000; Maryland, 4,044,-
000,000; Mississippi, 26,701,000,000;
North Carolina, 25,423,000,000; South
Carolina, 10,574,000,000; Tennessee, 18,-
707,000,000; Texas, 29,932,000,000; Vir-
ginia, 20,889,000,000, and West Virginia,
16,020,000,000. The cut in the South
by States, compared with the cuts of
1908 and 1907, is shown in the following
table:

	(In thousands of feet.)	1909.	1908.	1907.
Alabama.....	1,691,000	1,152,000	1,225,000	
Arkansas.....	2,111,000	1,657,000	1,989,000	
Florida.....	1,292,000	731,000	831,000	
Georgia.....	1,312,000	965,000	851,000	
Kentucky.....	861,000	859,000	913,000	
Louisiana.....	3,552,000	2,722,000	2,972,000	
Maryland.....	238,000	19,000	214,000	
Mississippi.....	2,573,000	1,861,000	2,094,000	
North Carolina.....	2,178,000	1,137,000	1,422,000	
South Carolina.....	898,000	561,000	649,000	
Tennessee.....	1,224,000	791,000	875,000	
Texas.....	2,069,000	1,524,000	2,230,000	
Virginia.....	2,102,000	1,199,000	1,412,000	
West Virginia.....	1,473,000	1,097,000	1,336,000	
Total.....	23,574,000	16,165,000	19,394,000	
United States....	44,585,000	33,224,000	40,256,000	

Of the total cut in the country, 44,-
585,000,000 feet in 1909, the South cut
23,574,000,000 feet, or 52.8 per cent. In
1908, in consequence of the financial
disturbances of the winter of 1907-08,
there was a falling off in production
from that of 1907 all along the line
aggregating 3,139,000,000 feet in the
South and 3,893,000,000 feet in the rest
of the country. Comparing 1907 with
1909, and bearing in mind that the fig-
ures of the latter year include returns
from 48,322 sawmills in operation in

that year made to agents of the census
bureau, while those of 1907 are the re-
sults of a census by mail, it is seen that
there was an increase in the cut in every
Southern State save Kentucky and Texas
between 1907 and 1909, and a total in-
crease in the South from 19,304,000,000
to 23,574,000,000, or by 4,270,000,000,
equal to 22.1 per cent., and in the rest
of the country from 20,952,000,000 to
21,011,000,000, or by 59,000,000, equal to
something less than .3 per cent.

Against nearly 53 per cent. of the
total lumber production of the country
cut last year by the South stands the
record of 3,410,294,000 cut by that sec-
tion in 1880, representing 18.8 per cent.
of the total 18,125,432,000 feet cut by
the country, and the rapid progress of
the South in this particular is shown
by the increase between 1880 and 1900
from 3,410,294,000 feet to 13,639,107,000
feet, or by 10,228,813,000 feet, equal to
301 per cent., and between 1880 and 1909
to 23,574,000,000, or by 20,164,000,000
feet, equal to 591 per cent., while in the
rest of the country the increase between
1880 and 1900 was from 14,715,138,000
feet to 21,368,488,000 feet, or by 6,653,-
350,000 feet, equal to 45.2 per cent., and
between 1880 and 1909 by 6,295,862,000
feet, equal to 42.7 per cent.

Of the nineteen States cutting more
than 1,000,000,000 feet in 1909, eleven
were Southern. Washington led the
country with a cut of 3,863,000,000 feet,
Louisiana being second, with 3,552,000,-
000; Mississippi third, 2,573,000,000;
North Carolina fourth, 2,178,000,000;
Arkansas fifth, 2,111,000,000; Virginia
sixth, 2,102,000,000; Texas seventh, 2,-
069,000,000, and Wisconsin eighth, with
2,025,000,000. In 1907 sixteen States cut
more than 1,000,000,000 feet, and the
changes in the industry that have taken
place since then are indicated by the
entrance of Georgia, Tennessee and
Florida into the more than 1,000,000,000
feet class; by Mississippi's taking the
place of Texas, and by Wisconsin, which
ranked fifth in 1907, taking eighth place
in 1909, and being ranked by North
Carolina, Arkansas and Virginia, each
of which produced less than it did in
the earlier year. The cut of Washing-
ton surpassed that of Louisiana in 1907
by 806,000,000 feet. In 1900 the differ-
ence was but 311,000,000 feet.

The expansion of the industry in the
South is in consequence principally of
the increase in the cut of yellow pine.
About 90 per cent. of the yellow pine
resources of the country is in the South.
Of the total cut of lumber in 1907, 44.3
per cent., or 17,834,000,000 feet, were of
yellow pine cut in the South, and 49.5
per cent. of the total in 1909, or 22,057,-
000,000 feet, was Southern yellow pine.

President J. A. Paty of the Texarkana
Shingle Creosoting Co., referring to an
inquiry made by him through the MANU-
FACTURERS RECORD, says:

Your valuable paper must reach every
man, woman and child in the United States,
judging from the letters and inquiries re-
ceived at our office

SUGGESTED BY IOWA.

The rate of increase in the population
of continental United States between
1890 and 1900 was 20.7 per cent. The
rate of increase in the aggregate popu-
lation of nine States and two Terri-
tories, according to figures of the pres-
ent census, between 1900 and 1910 is
but 18.8 per cent. Should such a rate be
the rate for the country, the 1910 popu-
lation will be found to be 90,281,555.
Comparison of States thus far reported
is made in the following table:

States.	1910.	1900.	P. C.
Arizona.....	291,354	122,831	66.2
Connecticut.....	1,114,754	938,420	22.7
Delaware.....	292,222	184,735	58.5
Iowa.....	2,224,771	2,211,851	—
Massachusetts.....	2,396,416	2,865,346	20.
Michigan.....	2,810,173	2,429,982	16.
Missouri.....	3,213,315	3,106,995	6.
New Mexico.....	327,396	195,310	67.6
Oklahoma.....	1,651,551	790,291	109.
Rhode Island.....	542,674	428,556	26.6
Vermont.....	355,956	343,641	3.6
Total.....	16,004,104	13,538,839	18.8

The decrease of three-tenths of 1 per
cent. in the population of Iowa in ten
years would indicate a remarkable
movement of population from a State
which heretofore has been regarded as
one of the most prosperous agricultural
States in the country, actually ranking
first in the value of products in 1900,
having moved from third place in 1890.
This prosperity has been used as the
moral to adorn many a tale reflecting
upon the South told by tyros who imag-
ined that statistics is the science of us-
ing figures to prove some absurd theory.

Between 1890 and 1900 the rate of
increase in the population of Iowa was
16.7 per cent. Had that rate been main-
tained to 1910 there would be today 372,-
719 more inhabitants of the State than
in 1900. But the census shows 7082 less
inhabitants, indicating, upon the pre-
sumption that the death rate and
birth rate in the two decades were
unchanged, a loss by removal in popu-
lation averaging nearly 38,000 an-
nually in the past ten years. At the
same time, other remarkable manifesta-
tions, according to the census, have oc-
curred. The number of farms in Iowa
has decreased from 228,622 to 216,807,
or by 11,815, equal to a little more than
5 per cent.; the total acreage in farms
has decreased from 34,574,000 to 33,-
905,000, or by 669,000 acres, equal to
1.9 per cent., and the improved acreage
from 29,898,000 to 29,467,000, or by 431,-
000 acres, equal to 1.4 per cent. At the
same time, the value of farm lands and
buildings has increased from \$1,256,-
752,000 to \$2,799,025,000, or by \$1,542,-
273,000, equal to 122.7 per cent. It is
conceivable that an increase in ten
years in the average value of farm lands
and improvements from \$43 to \$90 an
acre might have induced a migration of
some farmers to sections of the country
where equally or more productive land
might be had at one-half or less the
price per acre as the Iowa price in 1900.

But the previous history of this phase
of Iowa agriculture suggests that such
a migration could hardly have reached
the proportions of 38,000 persons a
year. Between 1880 and 1890, when the
population of the State increased 17.7

per cent., the value of farm lands with improvements increased from an average of \$23 to \$28 an acre, or less than 22 per cent. Between 1890 and 1900 there was an increase of 16.7 per cent. in the population, in spite of an increase to \$43 per acre, or at the rate of 53 per cent., in the value of farm lands. That was hardly a preparation, though, for a decrease of three-tenths of 1 per cent. in the population coincident with an increase to \$96 an acre, or at the rate of 123 per cent., in the value of farm lands, especially when the figures show a falling off of more than 10,000 in the number of owners, more than 2000 in the number of part owners and 669,000 in the number of acres, and an increase of less than 3000 in the number of tenants and less than 400 in the number of managers.

What is the matter with Iowa? Has it become so prosperous agriculturally that it has ceased to offer inducements to its own population to remain within its borders? Or is the 1910 census more accurate or less accurate than the 1900 census?

THE THOUGHT FOR LABOR.

In the midst of a political campaign involving unnecessarily attempts to excite class antagonism, the significance of a paper read last month before the American Iron and Steel Institute has not been fully appreciated. It was the paper of William B. Dickson, vice-president of the United States Steel Corporation, and it dealt with the betterment of labor conditions in the steel industry. The point specially emphasized was that while the importance of the attitude of the wage-earner toward the employer has been recognized, it is only in recent years, under the factory system, that the employer generally has come to view the subject from other than the wage-rate standpoint, and to feel his social responsibility. This has happened because experience in employing large groups of workmen has taught the importance of maintaining conditions that will tend to keep the employee satisfied with his lot.

Mr. Dickson cited a number of cases indicating the trend of policy in this particular dealing with subsidiary companies of the Steel Corporation, which, in the aggregate, employ about fifty men devoting all or most of their time at an annual expenditure of \$400,000 to the improvement of conditions affecting the safety and health of employees. He quoted David S. Beyer, chief safety inspector of the American Steel & Wire Co., to the effect that the first scattering efforts, devised originally as a species of self-defense, have expanded into more humanitarian lines, until now safeguards for workmen, once considered entirely satisfactory, are being replaced by improvements, while new forms are constantly coming to the front. The speaker mentioned the plan of Mr. George C. Crawford, president of the Tennessee Coal, Iron & Railroad Co., for the installation of sanitary bathhouses at the company's ore mines, the voluntary accident relief plan of the Corporation providing different compensation for temporary and permanent disablement based on the nature of the injury, length of service and number and age of dependents, the \$8,000,000 pension fund to be consolidated with the \$4,000,000 fund previously created by Andrew Carnegie and the appointment of the committee to consider the subject of the seven-day week in the iron and steel trades. This committee

is the outcome of Mr. Dickson's own statement made last spring:

It is my own deliberate judgment, after a period of almost 30 years' continuous connection with the industry, the early part of which was passed in manual labor in the mills, that the present conditions which necessitate the employment of the same individual workman twelve hours a day for seven days a week are a reproach to our great industry, and should not in this enlightened age be longer tolerated.

These words were not uttered in ignorance of the difficulties in the way of adjusting the manifold operations of a great industry to a six-day basis as nearly as possible. On the contrary, they were a manifestation of the spirit that would not permit any difficulty to block plans that may bring about relations grounded upon an appreciation of the mutuality of interests of employer and employee, to the removal of conditions that have been the occasion or the excuse for attempts to solve industrial problems upon theories, utterly neglecting the human factor and the opportunity for demagoguery to further its selfish aims at the expense of both employee and employer.

The very fact that at the first formal meeting of the American Iron and Steel Institute a leading feature was such a sane and sensible paper as that of Mr. Dickson is a notable sign of the times—a forecast of an ultimate blending of enlightened self-interest and rational regard for one's fellows that will reduce to the minimum the chance for any individual, whether politician of high or low degree, walking delegate or other parasite, to thrive upon misunderstandings of capital and labor.

TRAVEL COSTS HERE AND ABROAD.

Some very interesting comparisons of the cost of railroad travel in this country and in Europe are made in the November issue of the "Official Railway Guide," in the course of an article based upon the experiences of one familiar with journeying by trains. His European tour was within a territory of about 600 miles by 900 miles, and through countries with a total population of about 130,000,000, and cities with a total population of about 9,000,000. Comparison is made with a section of the North American Continent containing about 50,000,000 people, and cities with a total population of little less than 10,000,000. Estimates are based upon traveling under conditions on each continent as nearly similar as possible, considering the differences between railroad cars used in each country.

The comparison shows that railway travel in Europe is about 55 per cent. higher than in America. This is based on traveling first-class, first-class in Europe being equal to a first-class ticket in America plus a parlor-car seat. This refers to day travel, because, says the writer, sleeping-car fares are much higher in Europe than here. It furthermore appears that the expense for European travel is greatly increased by the custom of charging for transportation of baggage. In this case the traveler in Europe carried a trunk of 168 pounds weight. He paid \$76.55 fare and \$19.42 for baggage in traveling 2154 miles. Total \$95.97, or nearly 4½ cents a mile altogether. This is compared with travel in America over 2211 miles at a cost (including parlor-car seats) of \$60.15, with a possible charge of \$2.75 for excess baggage (150 pounds being allowed free), making a total of \$62.90, or a little more than 2½ cents per mile. In estimating, eleven trips are consid-

ered in each continent of as nearly equal length as possible. Average speed in Europe, 30½ miles; in America, 38½ miles per hour.

Estimating the journey in America to total the same mileage as in Europe shows the 55 per cent. higher cost abroad. This, it appears, is due to the custom of charging for trunks and other baggage not carried in the hand, because the ordinary second-class ticket abroad, which corresponds to the first-class ticket in this country, without parlor-car seat, costs practically the same as here, so then that an American traveling in foreign countries with only hand baggage would not be likely to observe the increased cost of travel. But to journey 2154 miles second-class, with baggage, would cost in Europe \$69.26, or 3.21 cents per mile, and in America \$51.86, or 2.41 cents per mile. In other words, it costs about one-third more than in America to travel in Europe with baggage of the weight here given, the railroad accommodations being equal.

According to these comparisons the public in this country enjoys reasonable railroad fares, and has (in comparatively few instances, at least) little cause for complaint as to rates charged. It has long been recognized by persons who have given attention to the subject that freight rates in the United States were wonderfully low in comparison with the rates charged in European countries, but the cost of passenger travel has rarely been brought out so clearly as by the data here presented.

SUGGESTION IN NAVAL ECONOMY.

Secretary of the Navy Meyer is quoted as suggesting that by abolishing half a dozen navy-yards and stations, and concentrating forces in the larger yards, the docking and yard facilities of the navy can be made more efficient, and the Government can save approximately \$10,000,000 a year. A shorter method of saving annually ten or twelve times ten million dollars would be in abolishing all the navy-yards and sending the vessels of the navy to the scrap pile. The immediate saving would be exceedingly small in comparison with the ultimate saving to the country. For, the abolition of navy-yards and the navy would do away with excuses and opportunities for the waste in foreign wars nowadays promoted by interests that would make the people of the United States pay the bills for the promotion of the purely commercial ambitions of such interests in foreign parts and involving subsequent outrages upon the Federal pension system for the benefit of pension sharks. Every new record made in aviation makes nearer the time when the aeroplane will send the navy to the scrap pile. Why prolong the annual waste for three or four years?

A SUCCESS.

Mr. S. H. Cohen, assistant to the president of the Appalachian Exposition, Knoxville, Tenn., writes to the MANUFACTURERS RECORD:

We want to thank you for the kindness rendered us through your editorial and local departments, and want to call your attention to the fact that the tremendous success of our exposition has induced the stockholders to increase the capital stock to \$250,000 and to hold an exposition in 1911. The results of our exposition are already bearing fruit, and we believe will materially add to the future prosperity of this country.

The Appalachian Exposition had a well-defined purpose—the making known on the spot of the tremendous natural

resources of the Appalachian region of the South. This purpose was carried out by business men upon a business basis. It is not surprising, therefore, that the exposition was a success. Its future upon a like foundation ought to be an influential factor in the growth of its section.

TELEPHONES FOR TRAIN DISPATCHING.

After the adoption of steel passenger cars, perhaps the most important of any of the changes in railroad practice of recent years, is the use of telephone instead of telegraph equipment for train dispatching. Lately the rapid increase in popularity of telephones for this purpose is remarkable. Whatever may have once been the attitude of critical railroad men as a whole toward them, it is undoubted that a considerable number of operating officials now heartily approve them, as their enlarged and rapidly-extending use testifies. Several of our leading trunk-line companies have adopted them with satisfaction, and, after practical experience, have given orders for additional installations on other parts of their systems.

It is claimed for the telephone system of dispatching that, as compared with the telegraph, it is quicker, safer and more accurate, besides having the additional advantage of not requiring a specially-trained operator to make its services available in an emergency, although as operated regularly in railroad practice there is a certain method followed to insure accuracy and speed. For instance, messages are sent according to a code, and in the transmission of figures they are spelled out. Thus "two" is not spoken as a word, but after this manner—"t-w-o." When the message is completed the receiving operator spells it back from the copy to the sending operator, this procedure serving as a check against mistakes. All the time the hands of the operators are free to use pen or pencil, or to set signals, as the telephone equipment includes a headpiece with two receivers—one at each ear—besides a transmitter, which hangs upon the chest in such a position that to talk into it an operator has only to drop his head slightly forward and his lips are at the instrument. In the case of the telegraph, the hand using the pen has also to operate the key and to set the signal.

Another important feature of the telephone method of dispatching is that instruments may be located in weather-proof cabinets at switches, sidings and other points where desirable, to be used by train conductors, who can thus communicate with the dispatcher in order to receive orders, thereby facilitating the movement of trains, and consequently attaining greatest efficiency for the railroad. Furthermore, at stations where an operator is employed only in daytime, a telephone set may be placed against the wall, with a door leading outside, so that a conductor, equipped with a key, may open the cabinet and use the instrument without entering the office. The mechanical exactness of the system is surprising, but would have to be witnessed to be fully appreciated.

Considering that the receiving telephone as we know its exterior appearance was invented more than thirty years ago, it may appear surprising that the instrument was not earlier placed in use for train dispatching. Doubtless it was in a few instances, probably on unimportant small lines, but to produce an efficient transmitter, and to make it

available for dispatching traffic on large lines, demanded many improvements to insure reliability, which could be had only by the exercise of great inventive skill and persistence. As it now is, the telephone in railroad service promises to be the means of enabling progressive managers to attain a much higher degree of safety in operating.

PROPOSED IRON COMBINATION IN ALABAMA.

Efforts are being made to interest the controlling interests in several of the larger iron companies in Alabama in bringing about a consolidation of a number of them. It is to be hoped that the movement may be successful. There is probably no more logical combination of great industrial interests in America than would be that of the consolidation of four or five of the leading iron companies of the Alabama district. As now handled there is a great deal of wasted energy and uneconomic handling of materials by unnecessary handling of freight. If these several companies were united, so that every furnace received its raw materials from the nearest source of supply, great economies could be affected. At present one company will ship its ore past the furnaces of another company to its furnace plant, and the other company will be doing exactly the same thing with its raw material. This system came about through the fact that in the organization of these various companies each one secured such coal and ore properties as seemed most available, but now the crisscrossing of ore and coke shipments results in the hauling of ore, coke and limestone a much greater distance in the aggregate than would be necessary under a consolidation or combination. If these scattered properties could be bodied up and united, they would form one of the greatest industrial combinations of this remarkable industrial age. A combination such as this could be made to include the ownership of more iron ore and coal than the United States Steel Corporation owns in the Alabama district. It would have in raw materials a foundation for almost limitless expansion. With these raw materials brought together under one management, having ample capital for expansion and reconstruction of every plant not up to date, great economies could be effected through this betterment of plants and the lessening of freight hauling, and many unnecessary expenditures of management could be eliminated. It would then be possible to bring to the management of these properties the highest managerial and technical skill to be found in the country, in this respect equaling the work of the United States Steel Corporation and the great independent steel plants which have a sufficient command of capital to justify such work. A consolidation of this kind could not only be made very profitable to the owners of these properties, but equally advantageous to Alabama and to the whole South. The work which is being accomplished by the United States Steel Corporation in the development of its subsidiary enterprises at Birmingham, the Tennessee Coal, Iron & Railroad Co. and the American Steel & Wire Co., which are spending many millions in betterment and development, could be duplicated by a new combination of this character, whereas none of these individual companies are in position to accomplish the same results.

If the financial people in New York and abroad who are giving serious study

to this matter can work out a satisfactory solution of it, they will do great things for the South's upbuilding.

FOR BALTIMORE.

At the general election held this week Baltimore, Md., authorized the issuance of \$7,500,000 of city stock for carrying out various public improvements. The stock authorized includes \$1,000,000 for constructing public highway over Jones' falls, a stream which cuts through the heart of the city and has always been a detriment to that part of the community through which it passes; \$1,500,000 for the construction and reconstruction of public school buildings, \$1,200,000 of this amount to be devoted to elementary schools and \$300,000 to secondary schools; \$2,000,000 for the purchase of property along the water front and the construction of suitable piers and docks to improve the city's shipping facilities, and \$3,000,000 of general fund bonds in which are to be invested certain parts of the revenues and income of various sinking funds created for the redemption at maturity of different outstanding certificates of indebtedness and stock issued by the city. The favorable action authorizing this issue of city stock is in line with the progressive spirit that has animated the people of Baltimore since the great fire of 1904. In addition to the above, the people have voted since that time approximately \$30,000,000 for public improvements. The completion of these various undertakings will make Baltimore one of the most modern cities in the country, both for the conduct of business and for the health and comfort of its people.

A CORRECTION.

We owe an apology to a paragraph promotive of the "Southern Commercial Congress." In our issue of November 3 we quoted the paragraph including the following:

"By the chairman of the executive committee it has been figured out that \$50,000 a year would bring enormous results. That sum means only about \$20 for every county represented in the organization."

The inference from that statement made by the uninformed would be that 2500 counties are "represented" in the organization. In an effort to analyze the statistics we stated that in the 16 States which promotion of the "Congress" attempts to picture as "represented" the last census counted less than half of 2500 counties. We should have said that the last census counted about 150 more than half 2500 counties in the States. Our point was not a settlement of the question of the number of counties in the 16 States, but as to the suggestion that, because a business organization here and there or an individual has been induced to contribute money to the support of the "Congress," or because easy-going Governors "appoint" delegates to the "Congress," there is the slightest justification for an impression that States and, therefore, all the counties in them, are truly "represented" in the "Congress" either officially or in any other way. It is a case again of the three tailors of Tooley street.

Virginia Corn.

At the Petersburg (Va.) Fair prizes were awarded to Morris Algers of Dinwiddie county for a yield of 166 bushels of corn, Arthur Belwood of Chesterfield county for 160 bushels, John Jenkins of Nottoway county for 135 bushels, M. L. De Shazor of Dinwiddie county for 120 bushels, and W. P. Presise of Dinwiddie county for 103 bushels to the acre.

Invitations have been issued for the meeting at Washington December 7-9 of the National Rivers and Harbors Congress.

The Elkhorn Coking Coal Field to Be Developed.

An Investment in Railroad Building and Coal Purchase and Operation of \$15,000,000 to \$20,000,000.

[Written for the Manufacturers Record.]

The purchase by the Consolidation Coal Co. of Baltimore of 100,000 acres of coal lands in the Elkhorn coking-coal field in Eastern Kentucky, and plans for its development on the basis of an annual output of 4,000,000 tons, is of wide importance in that it marks the opening up along broad lines of what is regarded as the largest undeveloped area of the highest grade of coking coal known to exist in the country. The purchase price of this particular tract was \$4,500,000. The Louisville & Nashville will spend \$5,000,000 to build to it. The company will spend \$1,000,000 on a road of its own and ultimately several millions in development work, and other railroad lines will be built. A total investment of \$15,000,000 to \$20,000,000 will be made, directly and indirectly, as a result of this deal. This property is known to contain nine distinct seams of coal, but in the deal for its purchase its value was based only upon one seam, known as Elkhorn No. 3. This seam has been prospected throughout the property. It shows an average of about 8000 tons per acre, or an estimated total of 800,000,000 tons, which, at an annual output of 4,000,000 tons, would be sufficient to last for 200 years. It is not to be supposed, however, that this company, backed by the millions of capital which it controls and with so vast a territory for expansion, will not within a reasonable period increase its output beyond that of 4,000,000 tons a year. Beyond the quantity contained in this particular seam, upon which development will now be centered, are the eight other seams.

A quarter of a century ago the MANUFACTURERS RECORD published some facts showing the remarkable high grade of Elkhorn coal for coking purposes. At that time a special correspondent pointed out that that section of Kentucky was destined by reason of the remarkable purity of the coal for coking purposes to become one of the great coking-coal centers of America. Later on, about 16 years ago, when the Merritts of Duluth controlled the Mesaba ore range, they contemplated the purchase of about 130,000 acres in this Elkhorn field owned by Boston capitalists, and Mr. T. J. Mitchell, then, as now, one of the highest authorities on coke-making in the Connellsville region, was employed by the Merritts to investigate the property with a view to its purchase, having in mind its consolidation with their Mesaba ores and the building of a new railroad to unite these two vast interests. The report of Mr. Mitchell was very strong in commendation of Elkhorn coal as a superior coking proposition, and his report to the Merritts would doubtless have resulted in the combination being effected but for the fact that a panic struck the country, and the Merritts, who thought they had command of great wealth, lost the control of the Mesaba property, which afterwards became the real backbone of the organization of the United States Steel Corporation.

Thus that district of Eastern Kentucky, long known for the remarkable quality of its coking coal, had to wait for the propitious time for its broadest development. It was without transportation facilities, and it was only after years of effort that the Chesapeake & Ohio Railroad was induced by the Big Sandy Company of Boston and their associates, owning the land on which Mitchell had made a favorable report, to undertake the great task of building a line through that rough country.

This road was completed at a cost of several million dollars just about the time that the panic of 1907 came upon the country, and that caused the temporary halting of the plans then under consideration for the development of the Elkhorn field. That the Consolidation Coal Co., ranking as one of the largest and financially one of the strongest coal owning and mining organizations in America, has gone into the field on so large a scale will mean a development there on lines broad and comprehensive in keeping with the richness of the district. Some idea of the purity of this coal can be had from the accompanying few analyses of the Elkhorn No. 3 seam in various parts of the field as made by the experts of the Consolidation Coal Co.

From these analyses it is readily seen that, commercially, this coal is primarily a gas and coking one of remarkable purity, thus giving it a wide field of application. Its further value as a coking coal has been thoroughly tested by the actual production of coke from it, and some leading iron and steel interests who have examined and tested this coke have testified to its exceptional high grade and purity. Indeed, it is predicted by those interested that when this property is developed and the coke placed in general use it will supplant Connellsville as the standard.

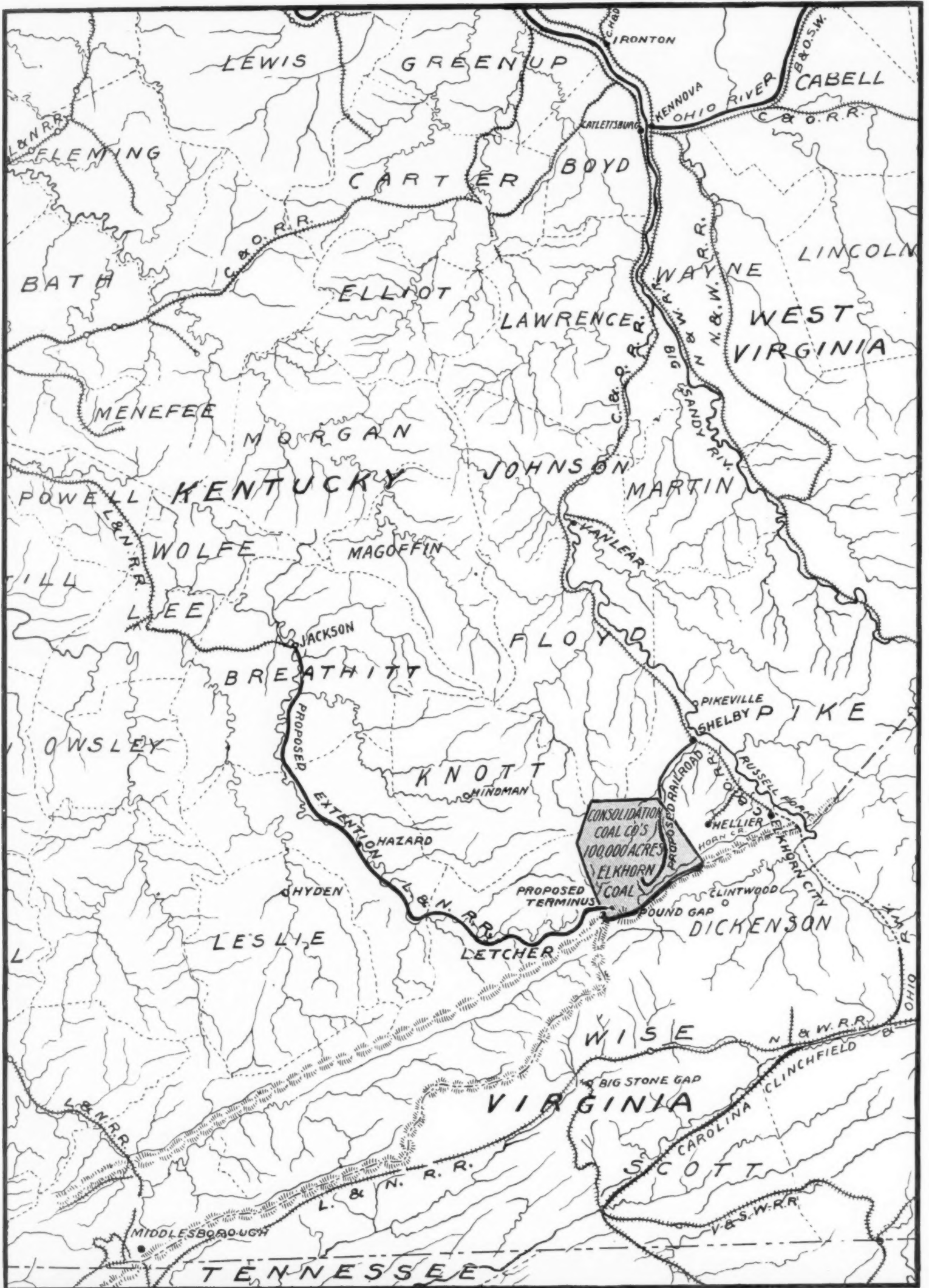
The plans for the development of the property will involve an outlay by the company of many millions of dollars, this to include not only the development of the property itself, but also the building of a railroad line 30 miles long to cost \$1,000,000 and extending from the northern end of the field to the Big Sandy branch of the Chesapeake & Ohio Railway at Shelby, a few miles below Pikeville.

The Louisville & Nashville Railroad has also authorized and begun construction on a line to extend from Jackson in Breathitt county, the terminus of the Lexington & Eastern Railway, which is controlled by the Louisville & Nashville, to the southern end of the property purchased by the Consolidation Company, a distance of from 90 to 100 miles. The cost of this undertaking, which will be borne by the Louisville & Nashville, will be from \$4,000,000 to \$5,000,000.

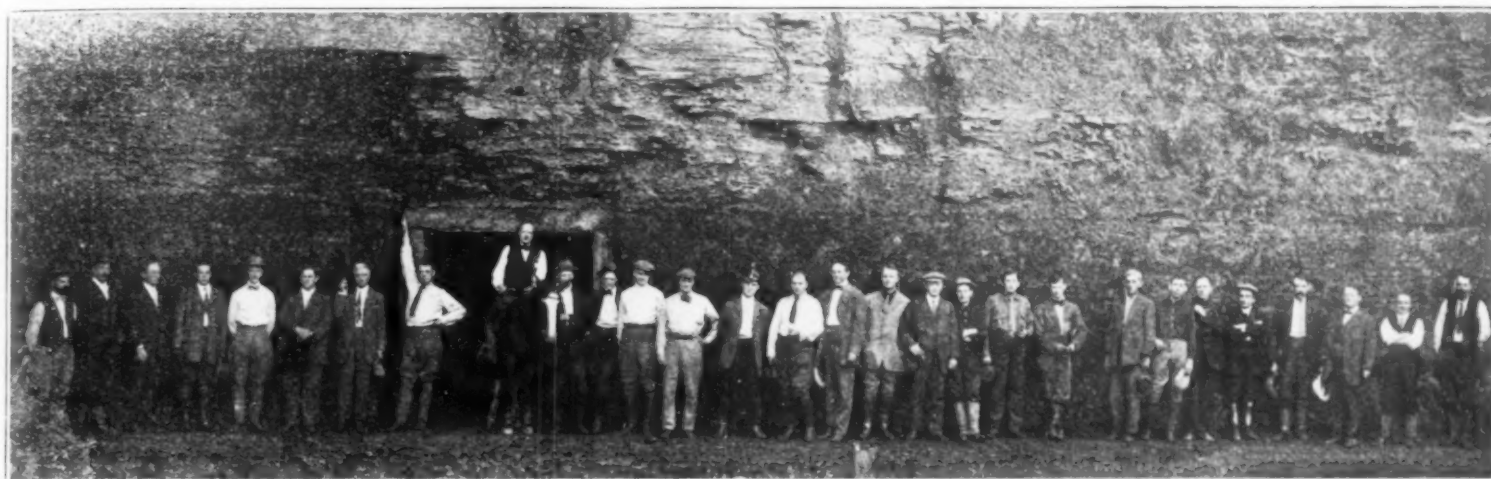
In addition to these plans, which provide splendid outlets from the field to large consuming markets, by the spanning of the Ohio River with a bridge at Ironton, O., a connection can be made by the Cincinnati, Hamilton & Dayton Railroad, recently purchased by the Baltimore & Ohio, with the Chesapeake & Ohio, thus giving another important outlet to the north, while the completion by the Carolina, Clinchfield & Ohio Railway of its northern end where it connects at Elkhorn City with the Chesapeake & Ohio a valuable outlet will be had to the South. Thus it will be seen that the best facilities will be available for distributing the output of the mines over a wide territory of growing and ever-expanding industrial activity.

All through the Central Western States, which will be the company's principal market, there is a large and growing demand for such a valuable coal that lends itself ideally for making gas in by-product ovens, both gas and coke in by-product plants in the iron and steel industry, illuminating gas for cities and towns, producer gas for various industrial purposes and locomotive fuel.

The company's engineers are now on the property laying out the plans for opera-



MAP SHOWING APPROXIMATE LOCATION IN ELKHORN COKING COAL FIELD OF KENTUCKY OF 100,000 ACRES PURCHASED BY CONSOLIDATION COAL CO. AND OUTLINE OF RAILROADS TO BE BUILT.



ELKHORN NO. 3 COAL SEAM, NINE FEET IN HEIGHT, EXTENDING FROM GROUND TO TOP OF MINE OPENING, SHOWN IN BACKGROUND OF CONSOLIDATION COAL CO. OFFICIALS AND PARTY.

tion work, but it is not expected that actual development will be started until spring, at which time it will be pushed rapidly forward to completion. As previously stated, all work will be based on an ultimate output of 4,000,000 tons annually.

The value and scope of the property is strikingly and comprehensively shown in the following report made by Frank Haas, consulting engineer of the Consolidation Coal Co., who, referring to the 100,000 acres purchased by his company, says:

"It is located in Eastern Kentucky, bordering on the Virginia-Kentucky State line. Its area covers the southern portion of Pike county, the eastern part of Floyd and Knott counties and the northern part of Letcher county. The northern part of the field lies on Elkhorn, Shelby and Beaver creeks, all waters of the Big Sandy River, while the southern part covers various tributaries of the Kentucky River.

"The surface, originally a high plateau of some 2000 feet elevation, has been cut by the various streams with deep ravines into drainage hills varying in height to 800 feet or more.

"The principal topographic feature is Pine Mountain, which extends in an almost straight and unbroken line for nearly 200 miles, making a natural as well as a State boundary to the east.

"The field at present is isolated from railroads, but railroad development is possible from two sources. From the north a line has been surveyed from the Big Sandy branch of the Chesapeake & Ohio up Shelby Creek via Shelby Gap and Elkhorn Creek into the heart of the property, a distance of 30 miles of comparatively easy construction and normal grades. From the south a line has been surveyed and is now under construction from Jackson, a present terminal of the Louisville & Nashville Railroad, up to the North Fork of Kentucky River into this property, a distance approximately 100 miles. With these two extensions constructed the field could be considered as fully developed, from a railroad standpoint, except the usual mine sidings.

"The exposed stratifications of the Elkhorn field are of the Carboniferous age and part of the Appalachian coal area which extends from Northern Pennsylvania to Alabama. The coal seams have as yet not been identified or correlated with those of the northern field of West Virginia, Ohio and Pennsylvania. It is a reasonable opinion, however, that they belong to the conglomerate series, and would therefore belong to the same group as the New River and Pocahontas coals of West Virginia. The stratifications in the field are free from faults. The general inclination of the stratifications is to the northwest, but it is so slight that the coal seams can, for

all practical purposes, be considered level.

"The maximum thickness of the coal formations in the Elkhorn field is approximately 1500 feet. In this interval nine coal seams are recognized. The seams of the lower half have not as yet been found in commercial thickness. The three middle seams, which are locally known as the Elkhorn Nos. 2, 3 and 4, are all more or less workable. The upper seams are so high in the hills that only a small part of the original acreage would be left, due to weather and stream erosion.

"The coal of the No. 3 Elkhorn seam is that upon which the value of this property is based. It has been prospected throughout the field. This seam would yield on an average 8000 net tons per acre, or 840,000,000 tons for the entire property. The Elkhorn No. 2 and No. 4 seams are known to exist on the property, but prospecting on these seams has been so scant that no opinion can be expressed.

"The Elkhorn No. 3 seam is above water level throughout the entire field. Crop lines extend nearly to the heart of the property. The stream bottoms are narrow and the hills steep, so that the eroded portion of the Elkhorn No. 3 seam would not exceed 25 per cent. of the total area.

"The coal of the Elkhorn No. 3 seam throughout the 100,000 acres of the Consolidation Coal Co.'s holdings is uniform in character and of the bituminous type. Commercially, it is primarily a gas and coking coal. This places it in a wide field of application, as by-product coal, illuminating gas, producer gas, cement burning, locomotive fuel and general steam coal.

"The quality of the coal is shown by the analyses. The special features noticeable from these analyses is that it carries as high volatile matter as any gas coal known, which would insure a high yield of gas. The impurities in the coal are exceptionally low. Comparatively, the ash is about one-half of that in the standard coking coal (Connellsville); in sulphur it is considerably lower, and the phosphorus is about one-third of that found in Connellsville.

"The coking quality of these coals has been tested at various times and places, particularly with a standard beehive oven erected on the property for experimental purposes. The results demonstrated that a strong, firm and bright coke can be made. These special points of merit of the Elkhorn coal place it in the highest rank of metallurgical coals.

"Elkhorn coal will be used in the Middle West for making gas in by-product ovens to replace the exhaustion of natural gas and the growing demand for gas as a domestic fuel.

"The coal will be used in by-product

plants in iron and steel plants where both coke and gas are utilized.

"As an unexcelled gas coal it will find ready market with the numerous gas plants in the Middle West.

"The large glass industry, which has grown up in Ohio and Indiana in the wake of natural gas, now finds itself with rapidly diminishing supply of the natural product. Producer gas is the most economical substitute, for which a good gas coal is essential.

"Powdered gas coal has been found the best fuel for burning cement clinker. This is a large industry in the limestone and marl belts of Indiana and Ohio.

"A gas coal is the most desirable fuel for locomotives from the fact that it responds so readily to variable power demands. A pure coal gives less trouble from cleaning fires and clinker, and in this class of application the market is practically unlimited, as Elkhorn coal will displace other coals where distance or freight rate will allow."

The development of this property is the most important happening in many years in the coking-coal industry of the country, and it will be watched with considerable interest not only because of its wide industrial importance, but also because it marks an additional development along the broadest possible lines, by substantial interests, in a section of the South that has heretofore lain almost dormant.

It is not the Consolidation Coal Co.'s first undertaking in Eastern Kentucky, as a year or more ago it purchased 30,000 acres of coal land near Paintsville, which it is developing on a large scale.

Thus the claims which the MANUFACTURERS RECORD made for this section more than 25 years ago as to the coke from Elkhorn coal being superior to Connellsville, having less ash, less sulphur and less phosphorus than Connellsville coke, are now to be demonstrated as a commercial reality by an expenditure running far into the

millions. Counting, as stated, that the Louisville & Nashville, in order to reach this territory, will spend \$5,000,000, the Consolidation Coal Co. \$4,500,000 for purchase and \$1,000,000 for its own railroad, and several millions for development work, the practical certainty that a bridge will be constructed to put the Cincinnati, Hamilton & Dayton in connection with the Chesapeake & Ohio, and the branches of that line that will be built, there is represented an aggregate investment of probably between \$15,000,000 and \$20,000,000 as the outcome of this deal which has been consummated by Mr. Clarence K. Watson, president, and Mr. Jerry H. Wheelwright, the vice-president of the Consolidation Coal Co. Last year Mr. T. J. Mitchell, the head of the Rainey coke interests in the Connellsville district, in an interview in the MANUFACTURERS' RECORD stated that as coal property in the Connellsville section was worth \$3000 an acre, and as the Elkhorn field would produce a superior coke, he felt quite certain that when the development of the Elkhorn field had been undertaken on a scale broad enough to be commensurate with its advantages, coking coal land there would ultimately be worth as much as in the Connellsville field. With the Consolidation Coal Co.'s purchase and development work on 100,000 acres, with E. J. Berwind's control of 100,000 acres in that field, and the Big Sandy Company of Boston owning about 100,000 acres there, these three concerns, with an aggregate of about 300,000 acres, control what is doubtless the most important coking coal field, looking to the future, existing in the United States.

The accompanying map shows the relative location of the 100,000 acres purchased by the Consolidation Coal Co. and the railroad lines as now planned for immediate construction, including the 90 to 100 miles of the Louisville & Nashville system already under contract.

Sketch of the Elkhorn Coking Coal Field

[Special Correspondence Manufacturers Record.]

Boston, Mass., November 8.

The Elkhorn coking coal field consists of about 300,000 acres lying on the headwaters of the Big Sandy River, in Pike and Letcher counties, Kentucky. This field, the limitations of which are defined by the chemistry and coking quality of the coal as well as by the existence of the two Elkhorn seams, is about 60 miles in length and 15 miles in width at the westerly extremity near Whitesburg, Ky., and tapers to a width of but a mile or more at the easterly extremity near the Norfolk & Western Railroad, at the point where the three States of Kentucky, West Virginia

and Virginia meet. Nearly the entire field lies in the northeast corner of the State of Kentucky, along the boundary between Kentucky and Virginia.

The existence of this field of coking coal was first brought to the attention of the public more than 30 years ago by two men who afterward achieved national reputations, the late John R. Procter and the late Prof. N. S. Sholer, both of whom were, in the years of their early manhood, connected with the Kentucky State Geological Survey.

They recognized the coking value of the coal of this field, and in their reports gave

it the name of the Elkhorn Coking Coal Field, from Elkhorn Creek, on the waters of which a large part of the field is located. They predicted that the field would become the most valuable source of metallurgical fuel in the world, and their prediction has become the conviction of everyone who has had the opportunity of examining the Elkhorn coal seam and testing the chemistry of the coal and the physical structure of the coke made from it.

This Elkhorn field of 300,000 acres is now held by three interests. The middle of the field, which is the most accessible, was taken up 25 years ago by Boston interests, who have conserved their property and secured the building of the Big Sandy division of the Chesapeake & Ohio Railway with it. Their interests are now held by the Big Sandy Company, and the first commercial coke ovens in the Elkhorn coking coal field are on the Big Sandy property on Marrowbone Creek. The westerly end of the Elkhorn field was acquired by Mr. Clarence Watson, Mr. John C. C. Mayo and others, who held it under the name of the Northern Coal & Coke Co. This property has now passed to the Consolidated Coal Co., and is to be developed on an extensive scale. It is reported that all the coal to be mined by the Consolidated Coal Co. is going to the by-product coke ovens of the United States Steel Corporation at Gary, Ind. The easterly third of the field has been acquired by Mr. E. J. Berwind, but no publicity has yet been given by him as to his plans.

The coke demand doubles every decade. The Connellsville field has probably reached its maximum of production. The time has come for the development of the Elkhorn coking coal field, the last and the best on the continent which will produce coke of physical structure and cellular space superior to the Connellsville standard and of the following analysis:

Fixed carbon.....	88.79
Ash.....	9.85
Sulphur.....	.447
Phosphorus.....	.006

The low sulphur and phosphorus of this coal will be of value to every inhabitant of the United States, for it will enable the steel companies to produce steel rails and steel for bridges, engines, machinery, automobiles and the hundred other demands of modern life of sufficient strength to meet the strains required. It will further enable the foundries of the country to produce castings free from the flaws caused by the presence of sulphur in the coke used in the foundry cupolas.

The Connellsville coke industry has developed from a small beginning up to the magnificent proportions it now shows. The Elkhorn field in the hands of its present owners can be depended on to begin on the same scale of development as is now shown in the Connellsville field. Where it will end it is difficult to foretell. The regularity of the seams, their freedom from parting, the excellent floor and roof make the mining condition most favorable for the use of power and machinery in the mining and handling of the coal, as well as in the burning, drawing and loading of the coke. It is safe to predict that the best talent and experience in men and the most highly-developed machinery will be used in the opening up and operating of the Elkhorn field.

In the MANUFACTURERS RECORD of October 21, 1909, Mr. T. J. Mitchell, head of the Rainey coke interests of the Connellsville region, and one of the most noted coke authorities in the country, who had become identified with the Big Sandy Company interests, said:

"It is well-known to those familiar with the iron and coke interests of the country that the Connellsville field, with its 40,000 coke ovens, is rapidly being exhausted. I have seen the value of coal property in this

territory advance from a nominal figure until it is now worth \$3000 an acre, and in some cases it is held at even higher figures. This is not entirely due to the proximity of this field to the Pittsburg iron and steel center, but rather to the universally recognized superiority of the Connellsville coke over any other coke produced in the United States. After a very thorough investigation I have reached the conclusion that the Elkhorn coal of Eastern Kentucky produces a coke superior to the Connellsville.

"This is not a new conviction. Sixteen years ago I investigated the field for the Merritts, who were then owners of the Mesaba iron-ore range. They were then negotiating for its purchase with a view to its development in connection with the Mesaba district. Had they been able to tie these two properties together they would have owned a combination of ore and coking coal greater than that now controlled by the Steel Corporation. * * * Recently I have made additional investigations of the Elkhorn coal for coking purposes, and have brought a considerable quantity to this section in order to put it to every possible test of coke-making. These investigations have only confirmed statements made in my letter to the representatives of the Merritts in 1893. * * * Considering the amazing development of the iron and steel interests of this country, as of the world, and bearing in mind that we must provide within 10 years a coke supply certainly more than double that of today—for iron production will double within that time—I cannot see why the Elkhorn district will not show a far more rapid growth than has ever been seen in the Connellsville field, and why the best of that coal field shall not fully equal in value per acre the prices of the Connellsville field. No one regards the \$3000 an acre valuation in the Connellsville field as too high. Why should not Eastern Kentucky, with a superior coking coal, show a duplication of such conditions?"

DEVELOPMENT OF CITIES.

Municipal Authorities Set Forth Some Explanations.

Letters from municipal authorities, in addition to the ones published in last week's issue of the MANUFACTURERS RECORD, setting forth reasons for city growth, follow:

CHICOPEE, MASS.

Mayor S. E. Fletcher.

The increase in population in the city of Chicopee in the past 10 years, amounting to 32.5 per cent., has been due largely to manufacturing development in this immediate vicinity. There has been no territorial expansion, nor many new industries.

The widely-varied manufactures of our city, which have not been greatly affected by depression in any one trade, have continued a condition of general business prosperity at all times. Our manufactures have increased by some additions, but particularly by enlargement of those already established.

The rapid development of manufacturing enterprises in the section about midway between Chicopee and Springfield has called for many workers who find it convenient to live in Chicopee.

For several years hundreds of the operatives in our local factories, through lack of tenements, were obliged to live in Springfield, but in the last few years a remarkable increase in building activity has enabled many of those people to remove to Chicopee. While the activity in building continues in nowise abated, there are still too few tenements to accommodate those desiring to live here, and there seems to be no reason for any cessation in that line.

Naturally, being located but three miles from the business section of Springfield, and one village of our city lying just across the Connecticut River from Holyoke, Chicopee must participate somewhat in the growth of those two manufacturing cities. Nevertheless, our principal increase has resulted from manufacturing development and expansion in our own city, and this, being of a healthy and progressive nature, and embracing so many and varied industries, bids fair to continue the rapid growth of our city in the future as in the past.

CLEVELAND, O.

Henry R. Gall, Secretary to Mayor.

The Mayor has requested me to reply to your letter of October 18, asking for an opinion from him with reference to the growth of Cleveland. He has been so engaged that it has been impossible to give it his personal attention. His opinion, however, can be expressed very briefly.

Annexation of outlying territory has added comparatively nothing to the population growth of the city. In the last 10 years the added population by reason of annexation has not exceeded 10,000. The location of Cleveland and the fact that it is a meeting-place for rail and water transportation, offering unusual facilities to manufacturing enterprises, is perhaps the best reason for the city's growth. These natural advantages, combined with active work by the commercial and business organizations of the city, are largely responsible for existing new enterprises, thereby adding to the population.

NIAGARA FALLS, N. Y.

George F. Nye, Industrial Agent.

Yours of the 18th of October, addressed to His Honor, the Mayor of Niagara Falls, has been referred to this department, and in reply would say regarding the increase in the population of Niagara Falls, N. Y., for the past 10 years that I believe it cannot be traced to any one thing in particular unless it be the enterprise of its citizens, coupled with the natural advantages of the vicinity. Our phenomenal growth is, in my opinion, due merely to the development and use of Niagara power and the securing of large and important industries, with the natural outcome of increased prosperity and thrift of our citizens.

YONKERS, N. Y.

Mayor James S. Pennoc.

Annexation of outlying territory may be at once eliminated as an element of our city's growth. On the contrary, the history of our city has rather been the lopping off of large portions of the territory which was originally included within the boundaries of Yonkers. Probably the most important factor in the development of our city is the manufacturing interests, which have very greatly developed and expanded within recent years. Notable among these are the Smith's carpet shops, the waring hat factory, the Otis Elevator Co. and the two sugar refineries. To be sure, considerable of the growth, too, may be attributed to the number of people doing business in New York who make this city their place of residence.

WATERLOO, IOWA.

Mayor J. R. Rector.

Waterloo's big growth of 12.2 per cent. in the past 10 years, the population at the last census being 26,693, is due to the booster spirit fostered by the commercial clubs. This spirit permeates all ranks of society. Every person, from the workman to the near millionaire, is a booster. As a result of this harmony and concentrated effort Waterloo has come to be one of the leading factory cities of the Middle West. Its 150 plans make all classes of products. Its spreader and milk separator factories

are among the largest in the United States. One big factory does a mail order business of its own and allied institutions to the amount of \$8000 to \$15,000 daily, and it is constantly growing.

The banking institutions of Waterloo have treated the factories very liberally. While conservative in their management, they are always ready to lend assistance to worthy manufacturing concerns. They have not lost a dollar by such a course.

The newspapers are constantly boosting the city and advertising its merits, not only as a factory point, but as a very desirable place of residence. It is probably safe to say that no other city of its size has been so thoroughly advertised as Waterloo.

Dallas-Oak Cliff Viaduct.

Construction details have been announced as to the Dallas-Oak Cliff viaduct, for which contract has been awarded, as stated by the MANUFACTURERS RECORD in October. This structure will be built by Dallas county, Texas, over the Trinity River, between Dallas and Oak Cliff. It will be a series of arches and girders of steel reinforced concrete, 5840 feet long by 53 feet wide, including a 44-foot roadway, with 4½-foot sidewalks. The roadway will be paved with hard rock and have space for an electrical railway, while electricity will light the structure. The height above the river banks will be 40 feet. Construction began on October 25, and contract requires completion by December 1, 1911, but the contractors are understood to expect completion by next July. About \$445,000 is the contract price, about \$75,000 will be expended for cement to be furnished by the county, and about \$50,000 is available for incidentals and engineering fees. It is estimated that there will be required 325,000 tons of steel girders, 1800 tons of reinforced steel bars, 65,000 barrels of cement and 49,000 cubic yards of gravel and sand. Messrs. Corrigan, Lee & Halpin are the contractors, and Ira G. Hedrick is the engineer, all of Kansas City.

Building at Houston.

[Special Cor. Manufacturers Record.]

Houston, Tex., November 5.

Throughout the Southwest there is little complaint heard in building and construction circles. The official report issued for the month of October for this city by the engineering department shows an increase in the amount of permanent building permits issued during the month of \$40,030 over the same period of last year. The report shows 66 permits for new buildings, aggregating \$111,360, were issued, as against 69 permits, aggregating \$71,330, for the same month last year. Permits for repairs and improvements issued during last month numbered 59 and aggregated \$11,465, while the same class of permits for the same period of 1909 totaled 84, aggregating \$17,474.

Fourteen Tobacco Sheds Planned.

The American Tobacco Co., 215 Fifth avenue, New York, will build 14 tobacco-storage sheds on a 25-acre tract of land at Richmond, Va. Each shed will be one story high, 142 feet by 102 feet 8 inches, and all the sheds will store about 20,000 hogsheads of tobacco. The material required will include 30,000 feet of 8-inch wire cloth of ¼-inch mesh, 20,000 feet of 36-inch wire cloth of ¼-inch mesh and 2200 squares of composition roofing. The company is in the market for this wire cloth and roofing, and bidders should address T. J. Walker, manager, Richmond, Va., or E. T. Mankin, Merchants' National Bank Building, Richmond. Mr. Mankin will award the construction contracts.

American City Growth: Causes and Effects.*

Fifty years ago it was regarded as most significant that the value of manufactured goods and of the products of the mines and the waters of this country had increased in 10 years from \$1,019,000,000 in 1850 to \$1,900,000,000 in 1860. At that time, of a total population of 31,443,321, only 16.1 per cent., or 5,072,256, lived in cities and towns of 8000 inhabitants or more. Between 1850 and 1860 this urban population had increased at the rate of 75 per cent., while the increase of the total population of the country had been 36 per cent. The increase in urban population coincided with the economic changes marking the comparative decline, through the rise of manufacturing industries, in the relative importance of agriculture in the affairs of the country. Though the full census reports are not yet available, enough has been published to indicate that the population of towns and cities of 8000 inhabitants or more in 1910 constitute about 36 per cent. of the total population of the country today, and number quite as many, if not more, than the population of the country in 1860.

In spite of the disorganizing and retarding influences of five years of war, reflected even in the imperfections of the census of that year, the urban population of 1870 was 8,071,875, or 20.9 per cent. of the total for the country. By 1880 this had increased to 11,318,547, and by 1890 to 18,272,503, while in 1900 the figures had grown to 24,992,190, or 33.1 per cent. of the total. Thus in 1900 one-third of our population was living in cities and towns of over 8000 people, while in 1870 only about one-fifth were classed as city dwellers.

In 1880 the population of cities of 25,000 inhabitants or more was 9,951,318, or 19.8 per cent. of the total. This increased to 14,903,162 in 1890 and to 19,757,618, or 26.1 per cent. of the total in 1900. About 200 cities of this class have an aggregate population now of about 26,000,000, being about 28.8 per cent. of the estimated 90,000,000 population of the United States, not including its outlying territories. The rate of increase between 1890 and 1900 in the aggregate population of cities having 8000 inhabitants or more was 36 per cent. If that rate has prevailed since then, the present population of such cities is between 33,000,000 and 34,000,000, or 36.6 per cent. of the total population. In 50 years, from 1860 to 1910, according to these figures, which for 1910 are as stated partly estimated, the urban population has increased 360 per cent. as against an increase in the total population of 184 per cent. Since 1870, with an increase in the country's population of 137 per cent., the increase in the urban population has been 312 per cent.

What is the reason for the increase of the urban population from less than one-sixth to more than one-third in 50 years? This tendency is world-wide, and its effect is necessarily world-wide. Its economic cause and effect have not yet received proper attention.

The answer is written in the records of the shiftings in the occupations of the people of this country, and a similar tendency throughout all the world. Comparing the figures of 1870 and 1900, we find an increase in the population from 38,558,371 to 75,477,467, a gain of 36,919,096, equal to 95.7 per cent., and in the urban population from 8,071,875 to 24,992,190, a gain of 16,920,324, or 209.6 per cent. In 1870

the inhabitants engaged in gainful pursuits numbered 12,505,923, or 32.4 per cent. of the total. In 30 years the number of these workers increased 132 per cent. to 29,073,233, and then constituted 38.5 per cent. of the total. In that period the inhabitants engaged in agriculture increased 74.7 per cent., or from 5,948,561 to 10,381,765, and those in all other occupations from 6,557,362 to 18,091,468, or 185 per cent. This total included increases from 1,244,383 to 4,766,964, or 283 per cent., in trade and transportation; from 371,650 to 1,258,538, or 238.6 per cent., in the professions; from 2,677,765 to 7,085,309, or 164.2 per cent., in manufacturing and the mechanic arts, and from 2,263,564 to 5,580,637, or 146.5 per cent., in domestic and personal service. Thus the number engaged in other pursuits than farming increased two and one-half times as rapidly as the number engaged in agriculture, professional men increased four times, and those in trade and transportation more than three times as rapidly.

Dividing all persons engaged in gainful occupations into two broad classes, the number of producers, counting all agricultural and industrial classes under this head, increased from 8,626,326 to 17,467,074, or 104.8 per cent., and the number of all others from 3,879,597 to 11,606,159, or 199.1 per cent.

Notwithstanding the tendency of the non-productive in gainful occupations to increase more rapidly in number than the producers, production, measured by dollars, has vastly advanced. In the past 30 years the aggregate annual value of production in agriculture, manufacturing and mining has increased from \$8,400,000,000 to \$31,000,000,000, or at the rate of 270 per cent. Between 1879 and 1909 the value of agricultural products increased from \$2,663,000,000 to \$8,760,000,000, a gain of \$6,097,000,000, or 228 per cent., while of manufactured goods the gain between 1880 and 1909 was from \$5,370,000,000 to \$20,000,000,000, or \$14,630,000,000, equal to 272 per cent., and the value of mineral products rose during the same period from \$365,000,000 to \$2,000,000,000.

It should be remembered in studying these figures that the value of manufactured goods, to be sure, includes the values of the materials derived from the farms and mines. All three of these grand divisions of American industry are more or less dependent one upon the other. Still, manufacturing has come to be the dominating industry of the country, with an ever-expanding influence upon farming, mining, trade, transportation and commerce. Because of this, in large measure, the most striking fact, perhaps, in the shifting of population as to occupations is the steady increase in the number of persons engaged in all the several classes of occupation in proportion to the total population, with the exception of the agricultural class. The proportion of those engaged in trade and transportation increased in 30 years, between 1870 and 1900, from 3.2 per cent. to 6.3 per cent. of the total population; in manufacturing from 6.9 per cent. to 9.3 per cent.; in domestic and personal service from 5.8 per cent. to 7.3 per cent., and in the professions from nine-tenths of 1 per cent. to 1.6 per cent. of the total. In the same period the proportion of those engaged in agriculture has declined from 15.4 per cent. to 13.7 per cent. of the total population, and from 47 per cent. to 35 per cent. of the total of those engaged in gainful occupations. In this marked increase in the number of persons to be fed, coincident with a halting in the increase in the number who supply food, we find a most vital point in American economics.

Production of foodstuffs is not keeping pace with consumptive requirements. The market basket tells the result.

The sudden swelling of the urban population between 1850 and 1860 was contemporaneous with and a consequence of the impetus given to factory system in manufacturing, as it supplanted the hand-trades and the neighborhood industries. The factory system meant the substitution of mechanical power for muscle power, the man with the machine doing many times the work of the man with muscle only. This is seen in the difference in the value of the product per capita for each factory hand in 1860 and in 1900. In 1860 we had 1,311,246 wage-earners in factories, and the average value of the output was \$1437 per hand. In 1900 the number thus employed was 5,308,406, and the average value \$2449. Thus the power of improved machinery almost doubled the producing capacity of every factory employe in 40 years. Within part of the same period, that is, between 1870 and 1900, the number of agricultural producers increased from 5,948,561 to 10,381,765, but the average value of farm products per capita for all those engaged in farm pursuits increased only from \$411 in 1870 to \$454 in 1900. In 1870 the average value of farm products per capita for those engaged in agricultural pursuits was \$411, compared with \$1437 as the average value per capita of those engaged in industrial pursuits, a difference in favor of the latter of \$1026. In other words, the factory hand at that time by the power of machinery produced three and one-half times as much in dollars and cents as the farm laborer. In 1900 the average value of production per capita to the farm worker was only a fraction more than in 1870, or \$454, but the average output of the industrial worker had then increased to \$2449, a difference in favor of the latter of \$1995, as compared with a difference in 1870 of \$1026. The proportion of three and one-half times as much for the factory hand over the farm laborer in 1870 had by 1900 increased to five and one-third times as much.

These indications are, of course, only of the most general character, and are suggested without reference to such questions as the modifications in the schedules of the census bureau, making it impossible for an absolutely accurate comparison of the same things at any two censuses, or the variations in the value of the dollar as a measure of production. They are simply cited in preparation for a suggestion to be made in a few minutes as bearing upon the problem of city growth.

As manufacturing encroached more and more upon farming as a dominant factor in American life, as it created the demand for a greater and greater number of wage-earners, instead of reducing the number according to the fears of many persons at the dawn of the age of mechanical invention, there came about a considerable displacement of population. Established in cities for the conveniences of distribution or creating new towns and cities, the factories called for more workers than the towns or cities could furnish of themselves. This demand for laborers could only be supplied by drawing from the country to the town and immigration from abroad. Under this condition immigrants settled in the cities instead of continuing in the new land the agricultural occupations followed in their old country. This tendency citywards has been especially marked in the immigration of the past 10 or 15 years, though in that time it has not necessarily found its way into industrial pursuits because it has selected the city as its dwelling-place. The tide of population from the country and from foreign lands to cities has been swelled not merely by those who are employed in manufac-

turing, but by millions of others who have sought to find in the urban life not only a relief from the manual toil in comparative solitude of the country regions and better opportunities for the education and the pleasure of their children, but also remunerative occupation in the professions, in mercantile life, in transportation activities and in the hundred and one pursuits created by modern invention for the comfort and convenience of mankind.

In 1870 there were but 53,000 miles of railroad in operation in this country. The electric street railway was still to be born. Now there are close on to 240,000 miles of steam railroads and more than 26,000 miles of electric railways, as compared with but 914 miles in 1890 and 17,000 in 1902. Between 1890 and 1907 the number of employes of electric lines increased from 70,764 to 221,429. Between 1902 and 1907 the number of employes in commercial central electric light and power stations increased from 26,909 to 42,006. It was not until 1875 that the dream of the telephone became a reality; now there are more than 7,000,000 telephones in the United States. This has created employment for thousands of men and women. Twenty years ago the man with a stenographer for assistance in his office was regarded as a specially fortunate individual and a rarity. Today an office without a stenographer would indeed be a rarity. The telephone and the typewriter, while marvelously aiding in all business transactions, have created employment for tens of thousands and have caused the development of new opportunities for the employment of others. In 1900 the automobile was of such slight standing that the census made no report on its manufacture, but included this industry with that of carriage and wagons. In the census of 1904 it was revealed that the industry had grown to have a capital of \$23,083,860, with earners of salaries and wages to the number of 13,220 and with an output of \$30,033,536 a year. The growth of this industry since 1904 has been one of the wonders of modern times. The world's history shows nothing with which to compare it. It has not only made occupation for probably 50,000 skilled workers and a small army of clerks, salesmen and other employes, but has created a new line of employment, that of chauffeur, the 300,000 automobiles in the country today calling for the employment of perhaps 150,000 drivers, most of them young men and many of them straight from the farm.

It is within the limits of conservatism to state that in the past 10 years the automobile industry alone has added, as a consequence of the expansion of the industry and as creating a really new occupation, at least 500,000 people to the urban population, and has to that extent drawn upon the rural population. Michigan illustrates this. The population of that State increased in the 10 years, 1900 to 1910, from 2,420,982 to 2,810,173, or 389,191, equal to 16 per cent., while the increase in 11 cities in that State was 301,337, or at the rate of 53.2 per cent. The greatest increase in any one city in the State was at Detroit, 180,062, or nearly one-half of the increase for the whole State. Omitting the cities, the population of Michigan practically was at a standstill between 1900 and 1910. Detroit is probably the chief center of the automobile industry of the country. Immediate effects of the growth of industries upon city development are likewise revealed in the case of Schenectady, N. Y. Between 1890 and 1900 the population of that city increased by 11,700, or at the rate of 59.2 per cent. In the past 10 years the increase has been from 31,682 to 72,826, or at the rate of 129.9 per cent., due to the fact that Schenectady has become the center of a great

*An address before the Philadelphia Chapter, American Institute of Banking. Noter, American Institute of Banking, November 4, 1910, by the Editor of the MANUFACTURERS RECORD.

locomotive works and an equally great electric industry. Birmingham, Ala., with an increase of 245 per cent.; Tampa, Fla., with an increase in 10 years of 143.2 per cent.; Fort Worth, Tex., with an increase of 174.7 per cent.; Wichita, Kans., with an increase of 112.6 per cent., and Oklahoma City, with an increase of 539.7 per cent., are among the 18 cities of more than 25,000 inhabitants which have increased their population in a decade by more than 90 per cent. The average increase for 200 cities of more than 25,000 inhabitants each, in most of which manufacturing has had an important influence, thus far reported by the census is 32 per cent., while the total increase for the whole country will probably be about 20 to 22 per cent.

Gratifying as is this urban growth, the careful student of public affairs must regret that it has been made at the sacrifice of rural growth. To that discrepancy is traceable largely the increased cost of living. With steady drains upon the farm it has been impossible for food to be furnished in quantities proportionate to the number of non-producers of food, in spite of improvements in cultivation methods. For the population of 38,558,371 in 1870 there were 25,484,100 cattle, 40,853,000 sheep and 26,751,400 swine, 235,884,700 bushels of wheat were raised and 1,094,255,000 bushels of corn, an average of about 2.4 head of cattle, sheep and swine to each of the population, and about 6.1 bushels of wheat and 28.3 bushels of corn. For the population of 1900, 30 years later, 75,477,467, there were 43,902,414 head of cattle, 41,883,065 sheep and 37,079,336 swine, and 522,229,505 bushels of wheat and 2,105,102,516 bushels of corn, an average of about 1.6 head of cattle, sheep and swine to each inhabitant and of about 6.9 bushels of wheat and 27.8 bushels of corn. Live-stock of all kinds declined 33 1/4 per cent. per capita. With the same per capita of animals in 1900 as in 1870, we would have had about 58,000,000 more than we had at that time.

It should not be imagined that the figures of increased prices that the non-producers pay for farm products indicate necessarily that the farmers are just that much more prosperous, for the cost of production has increased on the farm just as in every other line of industry. The things which the farmer buys, labor as well as implements and household supplies, have advanced. It is true, however, that these higher prices have brought to the farming interests of the land greater prosperity than they had known for many years. For a considerable length of time, up to 1893 or 1894, there had been a gradual increase in the number of live-stock and in farm production per capita, and with this increase in quantity there came a gradual but steady decrease in price. About 1893 there were signs of a turn, and the number of live-stock per capita decreased from year to year, and with this there came a slow but gradual advance in prices, until we have now reached the present situation. Decreasing farm population in proportion to the total population, though an important factor in the increased cost of farm products, is not the sole reason. There are other factors, such as the wonderful flood of gold which is being poured into the world's channels of trade. This is affecting every interest in the world. In effect, it is a gold inflation, and its bearing upon wages and the cost of living, upon investments and upon all the world's business activities deserves to receive far more consideration than has yet been given to it.

Returning, however, to the balance between the farm and the factory, the relative decrease in the number of agricultural producers and the very large increase in the number of consumers of agricultural products, we are forced to a recognition of

the supreme importance of giving to the agricultural interests of the world the benefit of the mechanical power which has brought about such rapid industrial and railroad expansion. Inventions that have attracted the farm population to more densely populated sections, the telephone, the automobile, the electric car and other agencies of rapid communication are already beginning to divert town population back toward the country. This turn of population movement back to the country hardly means, however, an increase in the production of foodstuffs. As yet it implies merely the making of a residence in the country convenient to occupations in towns and cities. What is needed is more mechanical power on the farm. Since the invention of the wheat harvester and thresher there has really been no like invention of revolutionary character connected with agriculture. Such inventions must come. Beginnings have been made in corn harvesting, and probably a hundred men have attempted to solve the problem of the mechanical harvesting of cotton. There have been many improvements on early inventions for planting and handling a number of crops. Electricity and the gasoline engine have already been applied to the lightening of the work of the farmer and his wife. With an expansion in this direction and with an enlargement of the means of rapid travel and of communication not only may one look for a lessening of the inclination on the part of the younger generation to desert the farm for easier work in the city, but may also expect the gradual enlargement of suburban life and a return to a vastly improved farm life. It would be folly to expect to stop the trend of population from the country to the city so long as the call of the city is more enticing than that of the country. When men, young and old, find that a laborer engaged in industrial pursuits, or in city employment of any kind, working eight or nine hours a day and having no capital invested, can secure a larger income and live with more comforts, with better accessibility to schools and churches than the farmer, who works from sunrise to sunset, and often for even longer hours, it is a waste of time to undertake to prove to them that farm life has more attractions and more advantages than city life. Confronted as they are by the lack of facilities for making homes comfortable and convenient, with roads that are practically impassable for a large part of the year, with the loneliness that comes from being shut out from companionship such as is to be found in the city, the population of the country will hear the call of the city and answer, "I am coming," regardless of all the conventions that may be held, and all the talk of politicians, and all the advice of newspapers designed to prove that "back to the farm" should be heard and heeded by the American people. In olden days the conditions were different, transportation was limited, city growth and industrial development offered comparatively few advantages over farm life. The result was an increase of farm population and farm production beyond the ability to make the farm profitable. The swing of the pendulum is now the other way. The consumer is paying the price and the farmer is steadily advancing and bettering his financial condition. There will be no material change until country life is made relatively as attractive as city life; until good roads are almost as universal as good streets; until high prices of farm products make farming more profitable than industrial employment, and thus drive men by economic forces back to the country. Though many bankers have taken a narrow view of the automobile and claimed that its development is a species of wild speculation destined to react

upon business interests, a broader and wiser view would be that the automobile is merely the forerunner in the development of power machinery on the farm, the creator of good roads and of easy means of travel. The engine which makes possible the automobile and the flying machine will likewise make possible the increase of the producing power of farm labor. The development of the gas or gasoline engine will open up new avenues of employment; it will lessen the drudgery of farm labor, make possible the sawing of wood, the chopping of feedstuff, the plowing of the land and the planting of the crop a work of mechanical power rather than muscle power.

Economic laws superior to the theories of men work out these changes. There are many signs that these economic laws are already tending to an increase in farm production per acre by reason of improved cultivation and more scientific knowledge on the part of the farmer. It is not true, as has been repeatedly proclaimed, that American soil is deteriorating. On the contrary, for the last 15 years there has been a steady, slow, but sure, advance in the yield of all leading crops per acre. It is true that we have not yet reached, nor even approximated, to the yield of grain per acre in most of the densely-settled countries of Europe. That is due, too, to economic conditions. In Europe the limited area and the dense population compel close and persistent cultivation of the land. The abundance of land with us tended for many years to loose cultivation. We are turning now to a better system, and the yield per acre is steadily advancing. We need not, however, look for any material decline in the cost of living as based on the price of farm products in the near future. Economic factors above and beyond all the discussions of politicians have brought about present conditions throughout all the world. We must face this new era of increasing gold production, of relatively decreasing farm population compared with the total population, measure if we can its influence on all business interests, on all investments (for its influence upon investments will be very great) upon the rate of interest and upon railroad and industrial expansion in this and in all other lands.

I would not dare to undertake to discuss these points tonight. I merely suggest them as among the things which the bankers need to study with a mind free from bias and open to the truth, wherever the truth may lead.

IN AND NEAR NATCHEZ.

Phases of Timber and Agricultural Development.

[Special Cor. Manufacturers Record.]

Natchez, Miss., November 5.

Adams and adjoining counties have gone in for diversification, and in the coming season a large amount of peanuts will be planted. The citizens of Natchez will get together in a meeting which will be held in a few weeks and will endeavor to induce many of the Adams county farmers to put in a large crop of peanuts this year. Already there has been planted in Natchez territory 3000 acres of peanuts, and steps will be taken to induce the citizens of this and adjoining counties to take the seed of this acreage and put them in a crop for next year. If this is done, the cotton-oil mills of this city will add machinery for the crushing of peanuts to make peanut oil. A member of one of the oil companies of this city in conversation with a representative of the MANUFACTURERS RECORD expressed his opinion as to the feasibility of putting in machinery for making peanut oil. He said that the machinery could be added to all cotton-oil mills as a small cost. The oil mills did

not have the best of business last year on account of the ravages of the boll-weevil. This is why they will turn their attention to machinery for manufacturing peanut oil. An excellent crop of cotton, however, is predicted by the cotton-oil men, as Mississippians are beginning to learn how to combat the ravages of the boll-weevil.

Louisiana is making rapid strides to the front. Not only will the planters throughout the State have a normal crop of cotton this year, but the timber interests of the State are being developed. Louisiana has passed over its boll-weevil ravages. This year, despite the boll-weevil, an enormous cotton crop was raised.

A vast amount of developments are under way in Concordia parish, across the river from this county, and in Catahoula and Franklin parishes in Louisiana. The pooled interests of the Taft and Balch syndicates have awarded a number of contracts for clearing the timber in Concordia parish. Contracts for this purpose will be awarded shortly in Franklin and Catahoula parishes. R. S. Wilds of Wildsville, La., has been awarded the log contract in Concordia parish, this contract involving \$75,000.

One of the first steps toward developing the timber interests of that region will be made when a large mill is erected by the Tensas River Lumber Co. of Louisiana, which is one of the Taft-Balch projects. S. A. Conn, general manager for the company, with headquarters in this city, informed a representative of the Natchez News today that the mill will be ready for operations by the first of next year. The contract for the machinery has been placed. The first investment will call for an outlay of \$25,000.

The Tensas River Lumber Co. of Louisiana will build three miles of railroad in the vicinity of Jonesville, La., connecting with the Natchez & Southern Railway at Frogmore, La., 15 miles from Natchez. A town will also be built by the company on that line within a few miles of Jonesville.

The D. K. Jeffris Company, the head of which lives in Chicago, is pushing its lumber enterprise in Concordia parish, Louisiana, not far from Natchez. The company, whose business is the manufacture of lumber, is building five miles of railroad in Concordia and is erecting a town at Jeffris, La., within a few miles of Natchez.

The Baxter Lumber Co., which is associated with the D. K. Jeffris Company, is also pushing work in Concordia. A colony of Tennesseans, who will be employed by the company, are expected to settle in Natchez this month. W. M. Shields, a real estate man of this city, who is engineering the colonization scheme, informed your representative there will be at least 25 Tennesseans settle in Natchez by January 1, 1911. DORTCH CAMPBELL.

For Draining 50,000 Acres.

The Golden Ranch Land & Development Co. of New Orleans has been incorporated with a capital stock of \$1,000,000 to develop 50,000 acres of land in Lafourche parish, near Lockport, La. Its property includes the Golden Ranch sugar plantation, with 2500 acres in cultivation, the remainder being prairie land, which will be drained and developed by cultivation. Charles D. Garnett of St. Louis is president; Frank B. Thomas and Ernest M. Loeb of New Orleans are vice-presidents; Fred B. Morrill, also of New Orleans, is treasurer. Some time ago the MANUFACTURERS RECORD referred to the proposed purchase and development of this property.

The State Department of Agriculture estimates this year's corn crop of South Carolina at 49,740,000 bushels.

CUMBERLAND RIVER IMPROVEMENTS.

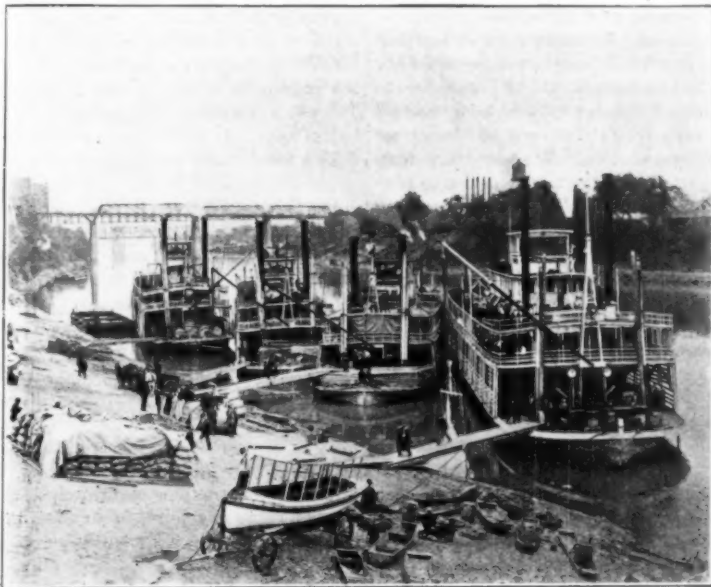
[Special Correspondence Manufacturers Record.]

Major C. A. F. Flagler, chief of the Corps of United States Engineers, has just officially announced the completion of the locks G and 7 in the improvement of the Cumberland River. The commercial organizations and river improvement associations of towns on the Cumberland are arranging for a celebration of the completion of the two locks about the middle of this month.

For 25 years the work of improving the Cumberland River has been in progress. About \$4,000,000 has been appropriated by the United States Congress for a system of locks and dams on this great stream, which has its source at Rock Castle River, in Kentucky, flows down into Tennessee, circling through a rich agri-

lower river 193 miles to the Ohio. The project of the engineers has met with the approval of Congress, and it now seems that it will not be many years until the Cumberland is canalized its full length.

The locks and dams thus far constructed are very much of the same type, with one exception. The lock chambers are 280 feet long and 52 feet wide, with a depth of 6½ feet of water, being sufficient for the heaviest packet boats that operate on the Cumberland. The dams are timber cribs, filed with stone, and vary in height and length according to the location. There has been constructed one concrete dam, and Major Flagler stated to correspondent of the MANUFACTURERS RECORD that it is probable that more concrete dams will be



WHARF AT BROAD STREET, NASHVILLE.

cultural empire, and then again through the Bluegrass State to the Ohio. The Cumberland, 550 miles in length, is twice the length of either the Thames, England's longest stream, or the historic Seine of France. The work of improvement has been slow until recent years, when some important progress has been made. This great work has attracted little general attention, and the local commercial world is just awakening to what it means to commerce, and more vigorous efforts are being made to secure the necessary appropriations. Thus far the work has been largely due to the efforts of a few aggressive men of foresight interested in the development of the South.

The work is under the direction of a corps of United States Engineers, of which Major C. A. F. Flagler, U. S. A., is chief. Major W. W. Harts was formerly the chief engineer, and directed a large part of the work that has been completed. The engineers have completed a project for the canalization of the Cumberland River practically the entire length. For this purpose the river is divided into divisions. The project contemplates six locks for the first division, below Nashville. One of these locks has been completed, and is now in operation. The second division extends from Nashville to Burnside, Ky., and 22 locks are contemplated for its canalization, seven of which are now completed, steps now being taken to put locks G and 7 into operation.

Six locks are contemplated for the division above Burnside to the Rock Castle River. One just above Burnside is about two-thirds completed. The upper river extends 357 miles from Nashville and the

built. The project of the engineers will give a minimum depth of six feet of water the entire year. The last annual report showed a cost of \$31,801 for maintaining the locks and dams.

The appropriations in past years for the improvements have aggregated \$445,000 for the lower river and \$2,650,000 for the upper river. This year the river and harbor bill passed by Congress carried an appropriation of \$663,000 for the lower river and \$95,000 for the upper river. The work will be prosecuted more aggressively in the future on the lower river in securing the outlet to the Ohio River. The appropriation provides for the starting of two new locks on the lower river and the purchase of the ground for all six contemplated in the plans of the engineers. The amount will be sufficient for completing half of the work of building the two locks and dams, by which time Congress will again meet and further provisions will be made.

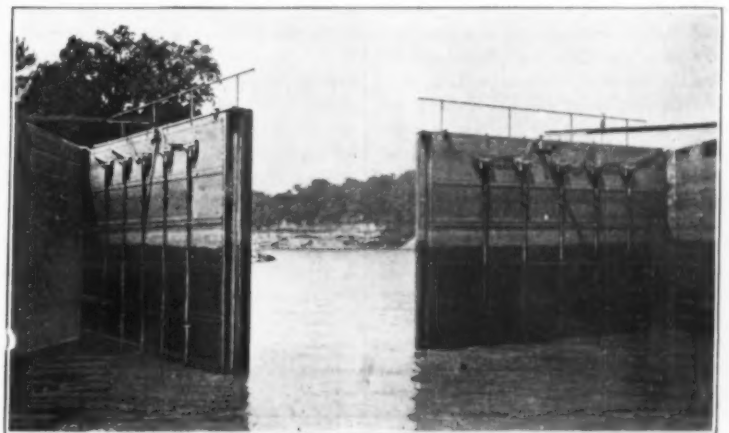
With the completion of locks G and 7 the river has been canalized from Caney Fork, 122 miles above Nashville, to lock A, 43 miles below Nashville, or a total distance of 165 miles, and less than one-third of the length of the river. As at present the improvements are of very little benefit to commerce. They do not afford navigation to the Ohio, leaving an inland section of the stream navigable. The local traffic on this inland stream would not be sufficient to warrant transportation companies in carrying on business.

Figures on the traffic on the Cumberland, with boats running six to nine months in the year, will be interesting in connection with the improvements in prog-

ress. The last statistics were in 1908, when the freight on the lower river aggregated in value \$4,621,197, and the number of passengers transported was 33,000. Total tonnage was 239,734 tons, the largest items being 6158 tons of logs, 2300 tons of lumber, 210,000 tons of crossties, 19,031 tons of grain and 2502 tons of tobacco. On the upper river the aggregate value of freight was \$8,745,289, and 8635 passengers, the total tonnage being 246,260 tons. The principal items included 44,440 tons of logs, 20,791 tons of lumber, 43,770 tons of railroad ties, 5058 tons of poles and posts, 38,284 tons of staves, 2530 tons of tobacco, 6102 tons of grain, 2800 tons of live-stock, 59,032 tons of sand and gravel and 17,827 tons of general merchandise. The Upper Cumberland country is particularly rich in timber resources, immense lots of chestnut, poplar, ash and other varieties being available when the tide of the river is high enough for transportation. The largest part of this timber is floated to market by means of rafts. Nashville manufacturers buy annually 40,000,000 to 50,000,000 feet. With the project for the system of locks and dams completed, and the river navigable for the whole year, those most interested would not dare to estimate what development will result. Transportation companies at present operating would have 12 months instead of six to nine months in which to operate their

Cumberland River Improvement Association, which has been reorganized since the creation of the State Commission. This association will hold its third annual meeting at Clarksville next month.

The greatest advantage of a waterway is its influence on transportation rates. The Cumberland River, though navigable only part of the year, has been the bulwark of Nashville's largest commercial interests. When the Nashville & Chattanooga Railroad was completed before the Civil War large shipments of grain were brought here by way of the river and then shipped to the Southeastern territory. Nashville steadily came to the front as the leading grain market of the South, being the gateway through which all of the Southeast has been supplied. When the Louisville & Nashville and other lines made connection with the great trunk lines from the West, reshipping and elevation privileges were granted the Ohio River points in order to compete with the boats. Nashville is given a through rate on grain handled at the local elevators, the same as Ohio River points. Grain bought in the Western markets can be handled in Nashville, and continue to some buyer in the South at the same through rate that the Western market is given. Cities that are not river points would have to pay a local rate after the grain had once stopped in their elevators. Atlanta has filed com-



CHAMBER OF LOCK A, CUMBERLAND RIVER.

boats, and with the new advantages it is certain that other companies would start. Since such important progress has been made in the work the commercial interests have been insisting upon the completion of the improvements with all of the speed expedient. It is now confidently believed that it is only a matter of a few years until the entire project is completed, and that no better investment could be made for the development of the country.

Judge M. T. Bryan of Nashville, president of the State River Commission of Tennessee, has been one of the most active figures in working for river improvement in this section. Judge Bryan was president of the Cumberland River Improvement Association, organized in 1886, when the first appropriation for the Cumberland was secured from Congress. The State Commission was created by act of the Legislature in 1890, and is at present composed of Judge Bryan, John Conroy of Clarksville, C. C. Slaughter, G. P. Thruston, L. C. Garrabrant and W. J. Cummins of Nashville. This commission was organized to promote the general improvement of waterways in which Tennessee is interested. Improvements of large proportions are being made on the Tennessee River. The commission has been active in collecting statistics and all information of advantage to encourage river improvement, and has had the hearty co-operation of various commercial organizations. John Conroy of Clarksville is president of the

plaint against the railroads on account of the reshipping privilege allowed Nashville, and the case is now pending with the Interstate Commerce Commission. The commission has once decided against Nashville, but has suspended the ruling, and a rehearing was recently granted. It is said that many of the grain buyers in the Southeast are against the complainants in this case, as Nashville having the reshipping privileges gives them a market to buy their grain on a footing with Ohio River points, much nearer to them. The capital invested in local grain elevators is estimated at \$5,000,000 or \$6,000,000, and the first ruling would be a great blow to these interests. The grain business is only one illustration of the advantage of a waterway to Nashville. The Supreme Court of the United States has heretofore decided in what is known as the Chattanooga case that Nashville is a river town. With the completion of the canalization of the river Nashville and all other points on the Cumberland will be strengthened from a transportation standpoint, with guarantees stronger than any railroad can give.

JOHN LEIPER.

Oil Refinery for Oklahoma.

The Bartlesville Oil Refining Co. has organized with \$300,000 capital stock to build a refinery at Oklahoma City. It will erect buildings to cost \$137,000 and install boilers, tankage, etc. A. J. Stewart is president and W. A. Coutant is manager.

TEXAS CITY COMMERCE.

Remarkable Growth of Business Within Six Years.

[Special Cor. Manufacturers Record.]

Texas City, Tex., November 3.

From less than \$1,000,000 in 1904 to a probable total of about \$50,000,000 for the year ending 1910 is the amazing showing Texas City is making in the development of the commerce of her port. If the rate of increase for the present year continues to the close, the total would put Texas City within \$10,000,000 or so of the figures furnished by all the Puget Sound ports combined, and would make it a greater port four times over than is Portland, Ore. In the one item of cotton there has been an increase in shipments over the same period of last year amounting to nearly 70,000 bales, and in many other lines, such as manufactured products, oil, machinery, coal, etc., the growth of exports and imports has been approximately as great.

The increase in population and agricultural development throughout Texas has a part in the great showing here made, as has also the fact that there is a sweep of commerce toward Southern ports; but the fundamental factor in centering so great a development at Texas City is, of course, the remarkable terminal and distributing facilities that have been provided through the activities of Capt. A. B. Wolvin, a mighty master of transportation on the Great Lakes, who has for the first time given to a Southern port the broad and scientific treatment which will have to prevail generally in order that the South as a whole may get the due benefit which should come to her from her great stretch of seacoast. With the port terminals and ocean transportation facilities of the South worked out on lines identical with those the Great Lakes have been favored with, the South should derive a wholly incalculable benefit from her great water-front, for the saving to the people of Texas alone, through the cheapened transportation rates the Wolvin facilities—ships and terminals—have effected, amounts to some \$12,000,000 a year. There is a lesson in the Texas City development of enormous value to every port in the South, especially at the time when circumstances call the Southern ports to make the most of their opportunities in anticipation of the day when the Gulf of Mexico becomes the scene of the world's greatest commerce, and every Southern port will be called on to the fullest extent of the facilities that have been provided.

During the few recent years since Captain Wolvin and his associates have been actively developing Texas City their chief energies have been centered on providing terminals and shipping facilities by water and by rail. A channel to the deep waters of the Gulf has been cut by the Government to a depth of 26 feet, but Government contractors are now at work to carry the depth to 30 feet. Ultimately 35 feet is counted on. The present channel, however, allows ships of large tonnage to come to the docks at Texas City. There are lines between New York and Texas City, with present weekly sailings; lines between Texas City and Mexico and also Central American ports, and, besides the vessels in the foreign trade, there are coal-carrying boats between Baltimore and Texas City. By the purchase of the three steamships of the New York-Brunswick Line and their diversion to the Texas City trade the Texas City Steamship Co. has five boats, so that regular weekly sailings from New York and from Texas City have been installed. The Harrison Line, the Elder-Dempster and the Leyland lines have inaugurated regular sailings between Texas City and Liverpool to continue during the

cotton season, four or five sailings every month. The Davis Coal & Coke Co. is shipping coal from Baltimore to Texas City under an arrangement that is expected to call for two or three cargoes every month. The Texas City Company furnishes dock facilities for the storage of 15,000 tons and provides cranes for unloading the coal from the boats and from the storage bins onto cars for shipment.

The Texas City Transportation Co. has added to its terminal and switching tracks until there are now over 25 miles in operation, covering all the wharves, warehouses and manufacturing plants and connecting with all the trunk-line railroads that run into Galveston.

Four of the absolutely fireproof warehouses that are to furnish the nucleus of the great warehouse system at Texas City have been completed. With electric cranes they permit of cotton bales being stored eight in a tier. Contracts covering the handling of 250,000 bales have been made.

The 500,000-bushel concrete grain elevator is being finished now, and is expected to be in commission this season, as a good movement of export corn is counted on from Texas, Oklahoma and other tributary country.

With a mile or so of concrete warehouses, giving insurance rates of $\frac{1}{4}$ to $\frac{1}{2}$ per cent.; cheap ocean rates and switching facilities ample for all shipping and local business, the management of the enterprise is now in position to devote attention to the development of the city as never before. While the warehouse and dock capacity will be increased at once and continued as required, and 10 miles of additional trackage will be laid, there will be expenditures made on the city not heretofore undertaken. A new concrete railroad depot will be built near the center of the town, not far from the company's three-story concrete office building just constructed. A concrete office building will be built on the company's docks. Meanwhile com-

panies and individuals are also making improvements in the way of building construction, and Texas City's advantages as a location for a great variety of industries is becoming widely recognized.

An early development was that of the Texas City Oil Refining Co. This company, owning its own oil fields in Oklahoma, is doing a large and profitable business, shipping in cargo lots, two boats running to Mexico and three to Philadelphia. Package stuff, lubricating oils, etc., is shipped to France and paraffine products to Europe.

The Federal Cement & Tile Co., with main plant at Hammond, Ind., has established a branch factory here, making roofing tile and other materials to supply the territory west of the Mississippi and south of the Missouri River. The Texas City plant, since starting a few months ago, has been running night and day.

A cottonseed delinting mill has been located in Texas City. It will utilize the lint from the seed, while also crushing the seed for oil. A 10-acre tract of land has been secured for warehouses and mill. Six or eight warehouses will be required eventually. At present work is being done on the mill, 75x250 feet, and on two of the warehouses. New machinery has been bought, all of which will be driven by electric motor. This enterprise will represent an expenditure of something more than \$100,000.

Texas City has also been selected as the site for the big refinery of the Texas Sugar Refining Co., a \$2,300,000 corporation organized under the laws of Delaware to erect a refinery with a capacity of 600,000 pounds of raw sugar per day. Texas City was selected after investigation, because of its deep water, the dock facilities provided (the company having its own dock), and at the same time being given free switching facilities to six trunk lines of railroad, and free artesian water, which will come from wells to be sunk on their

own property. The buildings will be of fireproof construction. Up-to-date machinery will be installed after designs by the Eastwick Engineering Co., New York, which will also erect the machinery. The promoters of the enterprise are desirous of getting as many Texas and Louisiana sugar planters identified with them as possible, and are working out their financial plans with that end in view. It is the expectation that work on the enterprise will begin at an early date. The company would expect to operate its own barges, bringing raw sugar from the Teche country of Louisiana and from Brownsville, Tex., and would also import sugar from Cuba, Mexico and the Hawaiian Islands. It is pointed out that there would be a market right at home for the capacity product of the refinery, but that the transportation facilities and rates afforded by Texas City would enable them to ship to all parts of the country.

Negotiations with other industries of greater or less magnitude are in various stages of completion, but what have been secured are considered sufficient to bring the population of the city up to 10,000. There is a complaint right now of a scarcity of labor. As the laboring man can get a good house, either renting or buying, on reasonable rates or terms; as living is as cheap as anywhere, the health conditions excellent and wages good, it is considered that Texas City offers attractive inducements to laborers. Ordinary day laborers get \$1.75 a day, longshoremen 40 cents an hour, cotton screwmen 60 cents an hour, and warehouse labor \$2.50 a day.

The terminal facilities of Texas City have received the greater degree of attention so far, but with efforts now being made to develop the city proper along general lines, the broad foundations for a large city here are now counted on to attract an increasing degree of attention the country over.

ALBERT PHENIS.



HANOVER HOTEL, AT WRIGHTSVILLE BEACH, NEAR WILMINGTON, N. C.

Estimated cost, \$250,000; to be erected by Atlantis Hotel Co.; architects, Milburn, Heister & Co., Washington, D. C.; building to be 168x300 feet; exterior finish, cement stucco; red-tile roof; private baths; fresh and salt-water plunges; refrigerator plant; electrical equipment; solariums; dancing pavilion; convention hall; each floor to have 61 rooms, with bath connection and storage closet; three passenger elevators; one freight elevator; two towers and water tanks for fire protection; bowling alleys; billiard rooms, etc.

INDUSTRIES WANTED BY SOUTHERN COMMUNITIES

WHAT IS YOUR TOWN DOING?

The MANUFACTURERS RECORD will be glad to receive from responsible correspondents in every town in the South brief items of news about business conditions and the opportunities for industrial enterprises. This information is desired for publication without cost of any kind to the sender, and regardless of whether the writer of the letter is a subscriber or not. The MANUFACTURERS RECORD accepts no paid matter in its reading pages. It seeks information of this kind from commercial and industrial organizations and from municipal authorities in every town and city of the South.

This department is open only to news facts of interest to investors, homeseekers and manufacturers. Communications of 200 or 300 words are likely to be given prompt publicity than more extended ones.

FORT WORTH LIVE-STOCK.

Board of Trade,

Fort Worth, Tex., November 5.

Editor Manufacturers Record:

The growing importance of Fort Worth as a live-stock center is emphasized by the report of the Fort Worth Stockyards Co. for the past month, showing increases in every kind of live-stock. The report shows that \$60,955 head of cattle were handled at the Fort Worth yards from January 1 to November 1, 1910. A most noteworthy feature of the live-stock business in Fort Worth for the portion of 1910 just passed is the receipt of 25,000 head of cattle imported from Mexico. During 1909 a few thousand Mexican cattle were shipped to this country, but they were principally for Kansas City and St. Louis markets. A few hundred head were sold in the Fort Worth markets, and so satisfactory were the returns that the bulk of the cattle of Mexican importation is now being slaughtered in Fort Worth. The cattle have paid a tariff of \$3.25 per head. Mexican cattle have been slaughtered for the production of cheap beef and have come in competition very little with the native steers.

Ramond Bell, manager of one of the largest ranches of highly-bred cattle in Mexico, who was in Fort Worth this week investigating local conditions with the intention of making heavy shipments here this winter, after viewing the situation in Kansas City, St. Louis and Chicago, said to a representative of the MANUFACTURERS RECORD:

"After close investigation, I find Fort Worth is as good, if not better, than any market I have visited, especially after freight rates and cattle shrinkage in shipping is considered. Beginning about December 1, I expect to send a few carloads to this market as an experiment, and, in case everything comes out all right, large quantities will follow, not only from our ranch, but from other ranches which have been viewing the situation in Fort Worth."

The hog market seems quite encouraging, with a total of 475,337 for the year to November 1, but in the face of these figures the enormous capacity of the packing-houses is by no means taxed, and the country is being scoured to find sufficient live-stock to run these gigantic factories to their full capacity. Market reports for the entire country show that Fort Worth is paying from 15 cents to \$1.25 per hundred more for the same stock than is paid in either of the other large markets situated in Kansas City or Chicago.

For the past six weeks the Fort Worth & Denver, Missouri, Kansas & Texas, Houston & Texas Central and Santa Fe railroads have been running educational trains over the State for the purpose of encouraging the industry of hog-raising in Texas. Experts, armed with every conceivable kind of statistics relating to the hog-growing industry, addressed the assembled farmers from the platforms of the trains on the subject of the raising more "mortgage lifters." The itinerary of the trains having been well advertised, large crowds listened to each of the lectures. The results from this series of lectures are

being made manifest already. Farmers in Texas, Oklahoma and Louisiana are taking up in a most convincing manner the matter of raising more hogs.

PAUL E. PALMER.

GADSDEN'S FUTURE.

Business Men's Club,

Gadsden, Ala., October 22.

Editor Manufacturers Record:

The Southern Iron & Steel Co. purchased the old Weller Rolling Mills plant, and is improving the same for immediate operation, which will fill a much-needed want at this point for merchant steel and for use by the Southern Shovel Factory at Gadsden. The Gadsden Car Works, owned and operated by the Queen & Crescent Railroad system, is enlarging its plant to about double its present capacity, which will give employment to over 600 men. Industrial improvement at Gadsden is the order of the day, and again the cry of more houses to accommodate our fast increasing population is heard all along the line. The future of Gadsden never looked so bright before.

Together with our industrial development our farmers are blessed with fine crops of corn, hay, oats, peas and other food products for man and beast, and the yield of cotton, owing to the favorable and beautiful fall weather, is turning out fairly well. The present prices of cotton and cottonseed bring to our farmers good returns. They realize on a 500-pound bale of cotton at 14 1/4 cents per pound \$71.25, and the seed brings them \$25 per ton, which would be \$12.50 from 500 pounds of lint cotton, making a total of \$83.75 for a 500-pound bale of cotton and the seed. Our farmers in this section are not rushing their cotton on the market. They are only selling enough to meet some of their pressing obligations and to realize a little ready cash. They claim that 15 cents per pound should be a minimum price that they ought to sell at, as food crops were short with them from the last year's crops, and they had to pay very dearly for food supplies to make this year's crop. They will be much better off next year and more able to produce cheaper cotton and all other farm products, as they have one of the finest corn crops they have ever produced.

When the farmers of the South learn the economic lesson of making their home supplies and cotton as a surplus crop, they are going to be the richest people in the world, and to say the least of it, the most independent of any people on earth. The Southern farmers have a monopoly on raising the commercial cotton of the world, but they have failed to use it, to their own detriment, by neglecting the raising of their food products for their own home consumption. With the Southern farmers it should not be a question of market prices for their own home food supplies. If it takes 500 bushels of corn to supply his consumption at home, it does not matter to them whether the price is 5 cents per bushel or \$1 per bushel; if it takes 1000 pounds of meat to do them, it is no matter to them whether the price is 1 cent per pound or 20 cents per pound.

If they have the corn and meat and other food products for their home consumption they are independent; if not, and they have it to buy, then they become dependent on the market price for what they have to buy. The food crops raised by the farmers of the South this year show conclusively that they are waking up to the importance of raising their home supplies. When they are fully awakened and realize the great importance of this matter, the South will hum along the line of progress as never before.

W. R. PHILIPS,
Secretary.

PUSHING FOR BRISTOL.

Board of Trade,

Bristol, Va.-Tenn., October 28.

Editor Manufacturers Record:

Announcement is made that the large band-saw mill at Fairmont, in the southeastern suburbs of town, which has been idle for some time, has been purchased by the Peter-McCain Company of this city, and full operations will be resumed on November 15. The Peter-McCain people early in the summer purchased the large timber boundary of the Cowan heirs, located beyond the terminus of the Holston Valley Railroad, and since that time have been building a road to connect with the Holston Valley road, and are prepared now to operate their trains through from their mill plant to their cuttings. Other large boundaries of timber adjacent to the Cowan tract are under option by the Peter-McCain Company, and surveys are now being made for their purchase, so that by January 1 this Bristol lumber concern will be owners of sufficient timber to run for a number of years. Probably 100 extra men will be taken on. It is understood that W. G. McCain & Sons, formerly of Neva, Johnson county, Tennessee, who have cut out in that section, will be connected with the operations of the Peter-McCain Company, making it one of the strongest lumber concerns in this territory.

The Bristol Board of Trade is at work installing an exhibit of local manufactured products in the spacious rooms of the organization on State street, within one block of the union passenger station. Every manufactured product in the city will be assigned space in the exhibition hall, and great care is being taken in the arrangement, so that there may be system and order in the showroom. The Southern Railway Co., through the courtesy of Mr. T. B. Thackston of the land and industrial department, has brought back from the Cincinnati and Knoxville expositions the magnificent collection of agricultural products, minerals and fruits that were on display in those places, and these will be loaned to the Board of Trade for the permanent exhibit, showing not only the various articles manufactured in the city, but the products of the territory immediately contiguous to Bristol. Engraved invitations will be issued the latter part of November for the opening of this exhibit, when people from the surrounding towns are expected to visit Bristol and see for themselves the wonderful advance made along all lines of endeavor here.

One of the biggest drives for trade ever made in this city was pulled off by the Board of Trade October 12, when the organization ran a special train from Rogersville over the newly completed Holston River road into Bristol, bringing more than 1300 people from Hawkins county into the city. The train was chartered and paid for by the Board of Trade, and the people through a territory 59 miles in extent, which has heretofore had no railroad connection whatever, were able to come to Bristol on the first passenger train ever

run over the road. No tickets were sold, but it was a free-for-all, and anybody who wanted to come had only to get on the train. The excursion brought the business men of Bristol and the farmers and stock-raisers of an immense territory into close personal acquaintance, the result of which was to create at once a demand for passenger service over the road into Bristol in the morning, returning in the afternoon. This trade has heretofore gone by wagon southward, and Bristol got little of it. The free excursion has turned the tide toward Bristol, and henceforth an immense wholesale and retail trade is expected from the territory penetrated. The Holston River road is 59 miles in length, and follows the entire length of one of the most beautiful valleys of the Appalachian region. These fertile bottoms, ranging in width from one to two miles on either side the north fork of the Holston River, and thence down on either side of the Tennessee River to Persia Junction, is a great cattle-producing country, and from the train windows thousands of splendid animals are seen grazing on the bluegrass meadows and hillsides along the route. The road will be operated under the direct management of Mr. J. H. McCue of Bristol, general manager of the Virginia & Southwestern Railway Co., a coal and timber road owned by the Southern Railway Co.

Recent borings close to Bristol have developed a deposit of kaolin 50 feet in depth. The analysis shows this material to be of the very highest grade. Soundings have been made over an area of about two and one-half acres, and it is believed that the deposit covers a much wider scope of ground.

The Gauthier Abattoir Co. began operations October 15, and is now slaughtering cattle and hogs for the market. President Gauthier says that he has offered him sufficient number of animals to keep his plant going regularly.

President W. E. Mingea of the Virginia-Tennessee Industrial and Agricultural Association, organized in this city August 17, after a meeting of representatives of the general and executive committees, has called the first annual meeting of the association for January 5, to be held in this city. General Secretary Runnels has been instructed to invite representatives of the agricultural department at Washington, the agricultural commissioners of Virginia, Tennessee and North Carolina and the directors of experimental stations in these States. It is also hoped that Governor Mann, who has taken such a forward step for industrial and agricultural development in Virginia through the MANUFACTURERS RECORD, will be present to deliver one of the addresses during the sessions of the association.

Secretary Hanson of the Bristol Poultry Association has sent out notices of the fifth annual meeting and exhibition to be held in this city December 14, 15, 16 and 17. Thomas L. Falkner of Tiffin, O., has been engaged as judge of the birds to be shown by local raisers.

F. M. RUNNELS,
Secretary.

Detailed information about towns seeking manufacturing enterprises and offering specific advantages for development and business opportunities can be found under the head of "Classified Opportunities" on pages 78 and 79, and under "Cities, Towns and Railroads Inviting Factories" on pages 108, 109, 110 and 111.

The Texas Commercial Secretaries' Association will hold its annual meeting at Waco November 18-19.

It is reported that Charles Vols, near Mission, Tex., netted \$9000 from 24,000 acres planted in onions this year.

Birmingham Iron Market.

[Special Cor. Manufacturers Record.]

Birmingham, Ala., November 7.

Inquiries for pig-iron the past week at least added an impetus to the situation, though not all resulted in actual business. For strictly standard Southern iron the minimum price has been \$11 per ton at the furnace for delivery the next 60 days at least. Some of the furnace interests have sold as far as the first half of next year on basis of \$11.50 per ton at the furnace. During the month of October a comparatively large tonnage of iron was booked by several furnace interests of the district, and, as far as can be learned, order-books are in fair shape for the next four months or more. Buying has been more or less for immediate requirements of buyers, they preferring to await results under present circumstances. Quite a little stress is laid on the pending elections throughout the country on tomorrow. Every indication points to the fact that with the fall elections behind us the chances for rapid recovery of normal business conditions are more than fair. Recent favorable rulings to the railroad companies of the South in the matter of permitting them to raise certain rates is also calculated to establish confidence on their part, which will tend to create a buying movement from that source. It is a well-known fact that railroad equipment and maintenance have been allowed to suffer the past two or three years. Whatever the cause may have been, it is a fact, and with the movement of the heavy crops of the country and the winter coal trade facing them, it is reasonable to suppose that an extra effort will have to be made to meet the demands of shippers. Charcoal iron enjoys practically the same demand as coke iron, though the price of same has not receded. It is quoted at \$22 to \$22.50 per ton at the furnace.

When questioned about the water-pipe situation one of the officials of a leading interest here said that buyers seemed to be shaping up their 1910 business, preparatory to starting on next year's business, and that inquiries for the first half of next year were now coming in reasonably fair. Prices are reported a little firmer than they have been for some time past. Following prices per net ton f. o. b. cars here are quoted: Four to six-inch, \$20; 6 to 8-inch, \$19; 8 to 12-inch, average of \$18.50 to \$19 with \$1 per ton extra for gaspipe.

Buyers of scrap are petty nearly in the same mood as buyers of pig-iron. Occasional lots are picked up where a bargain is available. Following nominal prices are quoted:

- Old iron rails, \$13.75 to \$14.25.
- Old steel rails, \$11.50 to \$12.
- Old iron axles, \$16.50 to \$17.
- Old steel axles, \$15.50 to \$16.
- No. 1 railroad wrought, \$11 to \$11.50.
- No. 2 railroad wrought, \$10.50 to \$11.
- No. 1 machinery, \$10 to \$10.50.
- No. 1 steel, \$9.50 to \$10.
- Old standard car wheels, \$12 to \$12.50.
- Light castings, stove plate, \$8.50 to \$9.

Steel Rail Orders.

[Special Dispatch to Manufacturers Record.]

Rail orders for the week include Illinois Steel Co., 1500 tons. Lexington & Eastern Railway Co. has ordered 1600 tons from Cambria company. Erie Railroad has placed its order, approximating 33,000 tons, which will probably be apportioned among several companies for 1911 delivery.

It is reported that 7000 acres will be planted in fig trees and 1000 acres in orange trees on a tract of land on the Galveston, Houston & Henderson Railroad between Genoa and Webster, Tex.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

ELECTRIC ROAD CONTRACT.**Tidewater Line Awards Section in Birmingham, Bessemer and East Lake.**

The Tidewater Railroad Co., according to a report from Birmingham, Ala., has just awarded contract to a large firm to build 46 miles of its proposed electric railway, which, when entirely completed, will connect Gadsden, Birmingham and Tuscaloosa. The contract covers that part of the line between East Lake and Bessemer through Birmingham. It will require an expenditure of about \$2,000,000.

J. M. Dewberry, president, who is quoted as making the foregoing announcement, is furthermore reported as saying that engineers representing the contractor investigated and approved the route, and construction is to begin on Fifth avenue in Birmingham as soon as the necessary bond given to the city by the company is approved by the city authorities. The line will enter the city on Underwood avenue in East Lake, and will run thence through the city by way of Fifth avenue to Bessemer. En route it will reach Woodlawn, Avondale, Ensley and Corey. A branch will go through North Birmingham to Thomas and Pratt City, connecting with the main line near Graymont. Mr. Dewberry declined, for the present, to announce the name of the contractor.

After the line from East Lake to Bessemer is constructed the line to Gadsden will be built and then the line to Tuscaloosa. Rails will be furnished by the Tennessee Coal, Iron & Railroad Co. The franchises granted by the city requires that work shall begin within 90 days, but Mr. Dewberry says that it will be started much earlier than that.

Included in the plans are the construction of a passenger station and a freight terminal, although they may not be taken up for some time. The road is ultimately to connect with the marine equipment of the line at Tuscaloosa, which will convey freight from there to Mobile, where a terminal company was recently organized by the interested parties to provide facilities for export and import shipments.

NEW COAL LINE PROJECTED.**Consolidation Company Will Build 30 Miles of Railroad in Kentucky.**

Further railroad construction to be undertaken for the development of the Consolidation Coal Co.'s recently acquired land in the eastern part of Kentucky will not be started until early next spring, according to an official, although work is already begun on the Louisville & Nashville's extension into that region.

The newly projected line is from Shelby, on the Big Sandy division of the Chesapeake & Ohio Railway, eight miles south of Pikeville, Ky., to Shelby Gap, 23 miles; thence to Potter Gap and a terminus beyond there in the heart of the coal fields. This route follows Shelby Creek and is about 30 miles long. The construction of the new railroad will cost about \$1,000,000. After the breaking up of winter location surveys will be completed and the work started. This will give an outlet to the Great Lakes, the West and Northwest, following the line of the Chesapeake & Ohio Railway, and a connection will be built with the Cincinnati, Hamilton & Dayton Railroad by bridging the Ohio River at Ironton, O.

The line which the Louisville & Nashville is building is from Jackson, Ky., following the North Fork of the Kentucky River through Hazard and Whitesburg,

Ky., to a point in Letcher county at the junction of Boone Fork and North Fork, about 100 miles from Jackson. The construction of this line will cost between \$4,000,000 and \$5,000,000. The routes of both roads are through rough, mountainous country.

It is reported that the Louisville & Nashville extension may be continued through the mountains to Appalachia, Va., although there is no official confirmation of this rumor.

ANOTHER ST. LOUIS ROAD.**Interurban Planned to Reach Important Cities and Towns in Illinois.**

Isaac A. Smith, civil engineer, Security Building, St. Louis, Mo., advises the MANUFACTURERS RECORD that charter has been obtained for an interurban railway to connect St. Louis with East St. Louis, Springfield and Centralia, Ill., besides other points in the latter State. He is president and general manager of the proposed line, which he says will serve a population (exclusive of terminal cities) of about 350,000 people and for more than two-thirds of its length will traverse sections possessing fine deposits of coal. The line will be about 300 miles long and the estimated cost of construction is \$18,500 per mile. It will be operated by either electric or gasoline power. Both passengers and freight will be carried. Financing has been arranged in Europe, but much of the cost will, he says, be paid by local subscriptions from people who will patronize the road when it is completed. The first board of directors is composed of residents of St. Louis, Mo., and Springfield, Ill.

Among other points that the road will reach are Alhambra, Edwardsville, Coffeen, Vandalia, Mount Carmel, Kinmundy, Louisville, Olney, Pawnee, Morrisonville, Hillsboro, Durley, Greenville and Carlyle, Ill. Connections with various railroads will be made, including the Pennsylvania, the Baltimore & Ohio, the Illinois Central, the Wabash, the Big Four, the Frisco, the Southern Railway and the Illinois Traction. An extension is contemplated to Nashville, which would make connection with the Louisville & Nashville Railroad.

Atlantic Coast Line Work.

An officer of the Atlantic Coast Line is quoted as saying that the company will put in service immediately double track from Callahan to Folkston, Ga., 23 miles, thus completing double track between the latter point and Jacksonville, Fla., 42 miles. Together with 12 miles of second track between Florence and Pee Dee, S. C., and 19 miles from Ashley Junction to Mount Holly, S. C., this will give the company about 272 miles of double track between Washington, D. C., and Jacksonville, or a little more than one-third of the distance.

The new viaducts over the Pee Dee and the Santee rivers in South Carolina have been completed, and that over the Savannah River is to be finished this month. These structures are of steel and concrete. Contracts are also being let to replace the wooden trestles over the Altamaha River, Georgia, with a concrete and steel viaduct similar to those built in South Carolina. The company has also relaid a large amount of track (165 miles) with 85-pound steel rails during the year and will continue this kind of track improvement in the coming year, for which rail contracts have been let. Automatic signals are being installed at various points. The new Waycross passenger station is to be placed in use January 1.

The extensive improvement of the Wadesboro branch in North Carolina is one of the most notable pieces of reconstruction undertaken. Grades have been

cut down, curves taken out, heavy rails laid and the entire line raised to a higher standard. It will be used in connection with the Winston-Salem Southbound Railroad which the Coast Line and the Norfolk & Western Railway are completing through North Carolina. The Wadesboro branch improvements are to be finished next month. There is also a valuable double-track cutoff being constructed at Weldon, N. C., including a concrete and steel viaduct.

In addition to all this, the company has lately awarded contract, as previously reported in the MANUFACTURERS RECORD, to build a line southward from Haines City, Fla., to Avon Park and other points, a total distance of about 52 miles.

New Railroad Companies.

Among the new railroad enterprises recently planned or organized are the following:

Cape Girardeau, Charleston & Hickman Railroad Co., chartered in Missouri to build a line from Ancil to Dorena via Kelso and Charleston, 52 miles. Contract has been let to Louis Houck, but subcontractors are wanted. Route is level and neither bridges nor tunnels are required. Connections will be made with the St. Louis Southwestern and the St. Louis, Iron Mountain & Southern railroads, besides the Chester, Perryville and St. Genevieve Railway, the Cape Girardeau & Chester Railroad, the Cape Girardeau & Thebes Bridge Terminal Railroad and the Saline Valley Railroad, which latter four are known as the Houck lines. The incorporators are: President, Giboney Houck; secretary, Ralph H. Schultz; Chas. G. Juden, Wm. H. Bohnsack and Chas. T. Lewis, all of Cape Girardeau, Mo. Jas. F. Brooks is chief engineer.

Athens & Southeastern Railroad Co., capital \$100,000; organized at Athens, La., to build a short line; officers, Harry R. Swartz, president, St. Louis, Mo.; J. E. Kennedy, vice-president, Athens, La.; J. T. Fleishel, secretary, St. Louis, Mo.; Marcus L. Fleishel, treasurer, Fullerton, La. All are said to be interested in the Chicago Lumber & Coal Co. at St. Louis, and M. L. Fleishel is general manager of the Gulf Lumber Co. at Fullerton, La.

The North Carolina-Virginia Railway Co., chartered in North Carolina to build a line from Spray, N. C., to Ridgeway, Va., 22 miles, of which six miles are in North Carolina and 16 in Virginia; authorized capital \$500,000. Incorporators are E. C. Wing, P. M. Smith, E. G. Demorest and B. H. Smith of New York county, New York; P. W. Glidewell and John D. Huffles of Rockingham county, North Carolina.

Missouri-Osage Railroad Co., chartered in Missouri to build a line from Linn to Wardsville, Mo., about 20 miles, via Osage City; capital \$250,000. The stockholders are H. C. Avis, Alfred K. Prince, Page Nelson and Alphonse Dur of St. Louis and M. A. Greding of Alton, Ill.

Madison County Railway Co., chartered in North Carolina with headquarters at Stackhouse to build a line from there to Allenstand, 10 miles; authorized capital \$50,000. E. B. McMillan and others are the incorporators.

New Equipment, Rails, Etc.

The Norfolk & Western Railway Co., writes an official, has purchased 15,000 tons of 100-pound rails from the Carnegie Steel Co., Pittsburg, Pa.

The Southern Railway Co. has received a McKen motor car for use on its line between Greenville and Anderson, S. C.

The Atlanta & West Point Railway is reported getting prices on 100 box cars and 100 flat cars.

The Texas City Transportation Co.,

says a market report, has ordered 500 tons of steel rails from the Tennessee Coal & Iron Co.

The Norfolk & Portsmouth Traction Co., Norfolk, Va., is reported contemplating buying 12 cars.

An officer of the Hawley lines writes: "We are not buying any cars at present." This refers to the report that they would purchase several thousand.

The Richmond, Fredericksburg & Potomac Railway will, it is reported, build 25 box cars in its own shops.

The Oklahoma City Railway Co. is reported to have ordered from the Danville (Ill.) Car Co. four closed cars 30 feet long.

The Louisville Railway Co., says a market report, has ordered 500 tons of rails from the Carnegie Steel Co.

The Pennsylvania Railroad Co. is reported in the market for several thousand tons of rails.

The Seaboard Air Line, according to a market report, will build 200 flat cars in its shops.

The Texas-Mexican Railroad, says a dispatch, will purchase some new equipment.

Rock Island Company's Report.

The Rock Island Company has issued its eighth annual report covering the fiscal year ended June 30, 1910. The combined income account of the Rock Island Company and the Chicago, Rock Island & Pacific Railroad Co. shows dividends on the railway stock, \$3,538,088; total income, \$3,564,071. After deducting interest and expenses there was a deficit of \$128,631. After the deduction of premium on bonds called and paid and the discount on bonds sold, besides sundry other items, there was a deficit of \$309,470.

It is noted, however, that this item is purely a bookkeeping deficit and that the cash and cash items amounted to \$1,133,498, as shown by the balance sheets. The chief income of the Chicago, Rock Island & Pacific Railroad Co. and (through it) of the Rock Island Company is from dividends paid by the Chicago, Rock Island & Pacific Railway Co. The total amount of stock of the Rock Island Company in the hands of the public on June 30 was, common, \$90,742,102, increase \$820,700; preferred, \$49,845,180, increase \$574,490. The bonds of the Chicago, Rock Island & Pacific Railroad Co. amounted to \$78,707,400, a decrease of \$9,043,480.

Harriman, Knoxville & Eastern.

J. R. McDowell of Knoxville, Tenn., who was awarded contract to build 17½ miles of line for the Harriman, Knoxville & Eastern Railway from Harriman eastward, has, according to a report from Knoxville, sublet work to the F. W. Hunt Contracting Co., the Cross Construction Co., A. G. Fretwell, M. M. Shultz, Geo. L. Davidson and Eddington & Pack. Construction is already begun. It is estimated that the cost of grading under this contract will be about \$300,000 and that about \$200,000 more will be required to lay track and otherwise finish up the property.

The work, as heretofore reported, requires the construction of a 70-foot steel through-girder bridge over Little Emory River. The route is through rough country. C. E. Hendrick is president; W. A. Rockwell, treasurer; Henry M. Winslow, secretary; W. J. Clark, chief engineer, all at Harriman, Tenn.

Coal & Coke Railway Report.

The Coal & Coke Railway Co. in its annual report for the fiscal year ended June 30, 1910, shows gross earnings, \$882,792; increase as compared with the previous year, \$105,484; net earnings, after the payment of expenses and taxes, \$320,

145; increase, \$138,791; surplus, \$21,223; total assets, \$26,002,886.

The report notes that the Interstate Cooperation Co. owns a large tract of oak timber in Braxton county. In order to develop this it is building the Elk & Little Kanawha Railroad from Gassaway, 22 miles to and through its property. It has purchased ground at Gassaway for a terminal station and a connection with the Coal & Coke Railway, as well as for a co-operation plant. It is expected the road will be in operation the coming year and will be a valuable feeder to the Coal & Coke Railway.

Railroad Notes.

Mark A. Brown of Chattanooga, Tenn., according to a report from that city, has invented an automatic air-brake coupling which is now being tested on the Chattanooga Southern Railway.

Roach & Stansell of Memphis, Tenn., who had several contracts on the line of the Kansas City, Mexico & Orient Railway, says a report, completed that part of the line from San Angelo to Mertzon, about 75 miles, three weeks before the expiration of the contract time limit.

WEEK'S HIGHWAY RECORD.

Progress in Southern Road and Street Improvement.

[Full details of highway undertakings are given in the Construction Department.]

Bonds Voted.

Groesbeck, Tex.—City voted bond issue for sidewalk paving.

Munday, Tex.—City voted \$5000 bond issue for street improvements.

Williamson, W. Va.—Lee district, Mingo county, voted November 8 on \$60,000 bond issue for road construction.

Contracts Awarded.

Asheville, N. C.—City awarded contract at \$5400 for 5000 square yards of concrete sidewalks.

Birmingham, Ala.—City awarded contracts at \$17,022.50 for street paving.

Joplin, Mo.—City awarded contract to pave section of Joplin street.

Crowley, La.—City awarded contract for 33,000 square feet of concrete street crossings.

Contracts to Be Awarded.

Amarillo, Tex.—City receives bids until November 21 for about 80,000 square yards of paving; various materials to be considered; \$75,000 bond issue available.

Annapolis, Md.—Anne Arundel county receives bids until November 15 for grading and macadamizing one and one-half miles of road.

Dallas, Tex.—City receives bids until November 14 for paving various streets and avenues.

East Sudbrook Park, Md.—Reding & Howard, Baltimore, will receive bids for constructing cement sidewalks.

Fort Worth, Tex.—City invites bids for constructing concrete curbing and sidewalk in Standpipe Park.

Helena, Ark.—Joseph Solomon and associates will pave section of Elm street.

Middle River, Md.—Cityco Realty Co., Baltimore, will construct about two miles of roads.

Montgomery, Ala.—City opens bids November 21 for paving two blocks of Clithral street.

Oklahoma City, Okla.—City receives bids until November 14 for constructing sidewalk aprons.

Pawhuska, Okla.—City will pave 20 blocks in business district.

St. Augustine, Fla.—City contemplates paving Bay street with asphalt; cost probably \$5000.

Tulsa, Okla.—City opens bids November 22 for paving about 90 blocks of street with asphalt; estimated cost \$350,000.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

FOR INDIA LAWN AND LINONS.

A \$900,000 Plant to Be Built at Greenville, S. C.

The manufacture of India lawns and linons from Nos. 80 to 100 combed yarns will be undertaken in the South by South Carolina cotton manufacturers and New England capitalists controlling large plants for building textile machinery. This is one of the most important cotton-mill enterprises announced for the South during recent years, and it will be located at Greenville, S. C. A company will be organized with a capital stock of \$900,000, and about \$650,000 has already been subscribed by the interested parties. Full details of the mill have not been decided, but the buildings will be of brick, with steel beams, two stories high, with saw-tooth roof for the weaving department, and the machinery will include 50,000 spindles and 1200 looms. J. I. Westervelt of Greenville will be the manager of the company, and he writes the MANUFACTURERS RECORD as follows: "Our idea will be to construct a strictly up-to-date and modern plant for making a very high-grade class of goods, and we feel that we are in a position to undertake this class of goods on account of the progress that has been made in the South in the matter of improvement of output as well as in the improvement that has taken place in the operatives themselves." The proposition for this mill came directly and voluntarily from the Potter & Johnston Machine Co., the Fales & Jenks Machine Co. and the Easton & Burnham Machine Co. of Pawtucket, R. I.; the Woonsocket Machine & Press Co. of Woonsocket, R. I.; the T. C. Entwistle Company of Lowell, Mass.; Stephen C. Lowe of Boston, representative of John Hetherington & Sons, Ltd., of Manchester, England.

Standard Knitting Mills.

The Standard Knitting Mills of Knoxville is proceeding with the construction of its extensive additions, detailed some weeks ago. This company has awarded all its contracts, and expects the new plant to be ready for operation next March. Its building contractors are Brimer & England of Knoxville, and the buildings are as follows: Cotton mill, with picker-room, three stories high and 220 feet long, costing \$40,000; boiler and engine-room, warehouse and bleach and dyehouse, costing \$10,000; knitting mill, 48x175 feet, three stories and basement, costing \$20,000; all of standard mill construction, brick and timber, with gravel roofs. The machinery will include 13,000 spindles, 50 cards with drawing, intermediates, speeders and picking, costing about \$120,000 and furnished by the Howard & Bullough American Machine Co., Pawtucket, R. I.; 50 knitting machines, costing \$15,000, and furnished by Scott & Williams, Inc., Philadelphia; seven cone-winders, costing \$8400, and furnished by the Foster Machine Co., Westfield, Mass.; sewing machines costing \$10,000, and furnished by the Union Special Machine Co., New York; the Singer Sewing Machine Co., New York, and the Merrow Machine Co., Hartford, Conn.; two 450-horse-power Stirling boilers, furnished by the Babcock & Wilcox Company, New York, and a

450-horse-power compound non-condensing Corliss engine, furnished by the Filer & Stowell Company, Ltd., Milwaukee, Wis.

The Cotton Movement.

According to the report of Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, the amount of cotton brought into sight for the two months ending October 31 was 3,592,193 bales, a decrease under the same period last year of 274,001 bales. The exports were 1,942,695 bales, an increase of 23,941 bales. The takings were, by Northern spinners, 425,220 bales, an increase of 49,447 bales; by Southern spinners, 403,383 bales, a decrease of 43,970 bales. Up to November 4 the amount brought into sight was 3,913,599 bales, a decrease under the same period last year of 314,940 bales. The exports were 2,105,569 bales, a decrease of 39,461 bales. The takings were, by Northern spinners, 498,573 bales, an increase of 58,520 bales; by Southern spinners, 438,863 bales, a decrease of 40,347 bales.

Cohannet Cotton Mills.

The Cohannet Cotton Mills of Fingerville, S. C., has been organized with a capital stock of \$100,000, succeeding the Fingerville Manufacturing Co. John J. Mitchell, Jr., of Boston is president; Craig S. Mitchell of Philadelphia, treasurer, and B. M. Hull of Pendleton, S. C., general manager. This company has 5000 ring spindles for yarn manufacture.

A \$150,000 Press Cloth Mill.

F. T. Parker, president of the National Hygienic Manufacturing Co., Builders' Exchange, Philadelphia, Pa., has about perfected arrangements for the Southern press cloth mill he was previously mentioned as planning. The enterprise will be capitalized at \$150,000. Location and details of plant have not been decided.

To Weave Silk.

Stehli & Co., 84 Green street, New York, will weave silk in their mill at High Point, N. C. They have awarded contract for the erection of an addition to be equipped with looms. At present the mill is throwing silk.

Wants to Buy Handkerchiefs.

G. J. Hawes of Cabot, Vt., wants to buy handkerchiefs, direct from manufacturers, in large quantities.

George Singleton of Dover, N. J., will build two silk mills at Southmont (post-office at Linwood), N. C. It is reported he has arranged for the machinery.

Northern Central Lease Ratified.

The lease of the Northern Central Railway to the Pennsylvania Railroad has been decided upon by a large majority of the stock, and the Pennsylvania is expected to lease the property within the next 30 days. It has operated the Northern Central for many years and controls it. The road reaches from Baltimore, Md., to Canandaigua, N. Y., about 300 miles, and, in connection with the Philadelphia, Baltimore & Washington Railroad and the Pennsylvania Railroad furnishes the latter with routes to and from Washington.

Wants Ice-Plant Location.

A location for an ice plant is sought by P. Latham, Jr., 1240 Madison street, Memphis, Tenn. He wants to build in some city or town where an ice supply is needed. The equipment is ready for shipment and has a daily capacity of 10 tons of ice.

Coal shipments over the lines of the Norfolk & Western Railway for October amounted to approximately 33,000 cars. As compared with shipments for September, these figures show an increase.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

October Building Operations.

As indicated by reports from representative cities, Southern and Southwestern building operations for October continued active, and in many localities substantial increases have been noted as compared with previous months. In Atlanta permits were issued for a cost of construction amounting to \$474,879, as compared with \$384,554 for October, 1909. For the first 10 months of the year the increase as compared with the similar period last year amounts to \$1,601,054. An increase of nearly \$40,000 marks October operations in Birmingham as compared with October, 1909, and for the first 10 months of 1910 an increase of \$88,262 was made over the similar period last year. Permits were issued in Jacksonville during the month to the number of 113, which represents a cost of construction of \$136,350 for frame buildings and \$91,100 for brick and stone structures. As compared with September these figures show an increase of about \$21,000. Operations in Chattanooga for the month amounted to \$67,834 and in Knoxville to \$38,093. A total of 103 permits was issued in Dallas, representing an expenditure of \$170,515. In Houston permits were issued to the amount of \$111,360, showing an increase of approximately \$40,000 as compared with October, 1909. Permits were issued in San Antonio to the number of 318 during the month, representing a cost of construction of \$157,125. Showing an increase of nearly one-third, building operations in Oklahoma for the month amounted to \$300,141. A total of 44 permits was issued in Tulsa during the month, representing an expenditure of \$30,265. In Little Rock permits were issued for a total cost of construction amounting to \$75,459. For new construction, alterations and repairs a total of 106 permits was issued in Richmond, representing an expenditure of \$259,822. In the District of Columbia 516 permits were issued during the month, representing a cost of construction of \$656,702.

Meeting of Executive Board.

At a meeting of the executive board of the Hardwood Manufacturers' Association of the United States, held at Cincinnati October 29, Secretary Lewis Doster of the association outlined to the board the work being done in the inspection department. On motion, Mr. Doster was appointed chief inspector, with power to deputize an assistant chief inspector and others as needed. After the transaction of other business it was decided to hold the ninth annual meeting of the association at Cincinnati on January 31 and February 1, 1911. President R. M. Carrier was authorized to appoint an entertainment committee.

Big Order for Crossties.

A dispatch from New Orleans states that the St. Louis Southwestern Railway has awarded a contract to the National Lumber & Creosoting Co. of Texarkana, Ark.-Tex., to supply it with crossties to the value of \$2,000,000. In order to fill the contract it is announced that the National Lumber & Creosoting Co. has secured an option on 25,000 acres of timber lands owned by Hoshall & McDonald Bros. of Helena, Ark., and will install several tie-cutting plants. The ties will be principally of white oak.

Will Manufacture Oak Lumber.

With reference to the plans of the Peter-McCain Lumber Co. of Bristol, Tenn., which recently purchased a tract of timber

near Ruthton, Tenn., the company states that the area amounts to 300 acres and will produce about 3,000,000 feet of high-grade oak lumber. A mill has already been established and will be operated on the tract as long as the timber supply lasts, after which it will depend on small boundaries in the same locality for a supply.

Big Sawmill in Operation.

The Peavy-Byrnes Lumber Co., Shreveport, La., announces that its new plant has been completed and is in operation. The entire plant involved an expenditure of about \$400,000, including sawmill, planing mill, drykilns, sheds, tramways, dwellings for employees, store and office building. In addition to these, the company has completed a railroad 10 miles in length connecting its holding with the Frisco lines and the Iron Mountain Railroad.

From Ohio to Tennessee.

A dispatch from Tracy City, Tenn., states that the W. F. Bradley Lumber Co. of Zanesville, O., has secured an extensive acreage of timber on the Cumberland Mountain, near Tracy City, and is removing its sawmill from Ohio to the tract. In addition to the manufacture of lumber it is announced that the company will manufacture wagon spokes, rims, etc., and will later install machinery for the manufacture of tool handles.

Turpentine Association to Meet.

At a meeting of the executive committee of the Turpentine Operators' Association, held at Jacksonville last week, it was decided to hold the tenth annual convention of the association at Jacksonville on November 16 and 17. The official call for the convention has been issued by President J. G. Boyd and Secretary James A. Hollomon.

MINING

Wisconsin Steel Co. Development.

The Wisconsin Steel Co. (subsidiary to the International Harvester Co. of Chicago) is progressing with its coal land development in Harlan county, Kentucky. It has 20,000 acres, and is equipping the mines with electrical machinery, etc., for a daily output of 2000 tons of coal, and is constructing 300 coke ovens. The expenditure for the development has been estimated at \$500,000. Lumber for construction purposes is manufactured in the company's own mills, and by January 15 a railway extension to the coal property will have been completed. The company will soon be purchasing its heavy machinery and other equipment. Correspondence should be addressed to W. C. Tucker, superintendent, Hotel Touraine, Big Stone Gap, Va. Last March the MANUFACTURERS RECORD announced plans for this development.

Jellico Cannel Co.

The Jellico Cannel Co., Newcomb, Tenn., has begun shipments from its coal mines opened two months ago. It is building a tiphouse with several chutes, and has ordered two additional cutting machines to increase mine output. The new tiphouse will enable the company to load box cars as well as open cars. Three sizes of cannel coal—round, nut and block—are marketed.

Will Develop 8000 Acres.

The Geary Land & Development Co. of Lexington, Ky., has incorporated with a capital stock of \$130,000, and is reported as to develop 8000 acres of coal and timber lands in Pulaski county, Kentucky. Among the incorporators of the company are John A. Geary, Michael Corbett, John F. Scanlan and T. T. Supple, all of Chicago.

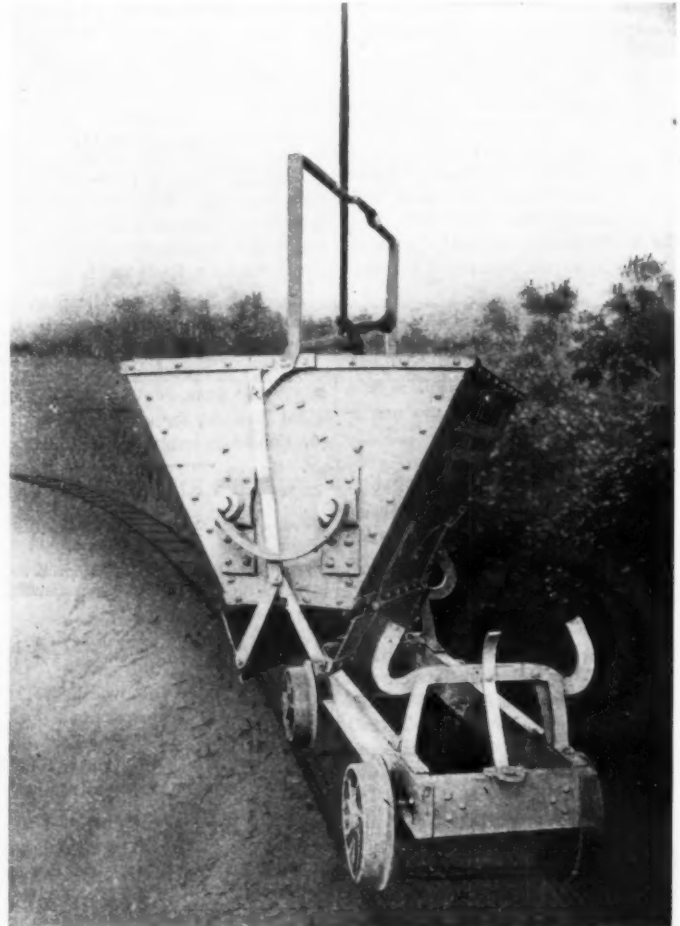
MECHANICAL

Blaker Concrete Dumping Car.

Necessity in a single instance often results in the designing of an equipment that is afterward offered to the public. Such a design is the Blaker concrete dumping car illustrated herewith. This car is the in-

bucket with a simpler dumping arrangement that some buckets that are on the market selling for more money than this combined car and bucket can be sold for.

"I have arrangements at present with the American Car & Foundry Co. of Huntington, W. Va., for its manufacture. I wish to sell the patent outright or place it on royalty."



BLAKER CONCRETE DUMPING CAR.

vention of J. L. Blaker of Blaker Mills, W. Va., who briefly describes it as follows:

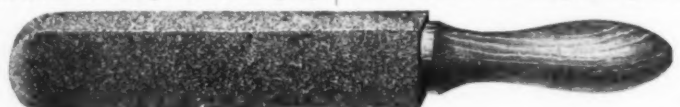
"The car is patented in Great Britain, France and Belgium, and patents applied for in Germany, Canada and Mexico. The original car was made for use in building a concrete mill dam. It was made with the object of reducing the cost of placing the concrete, saving material and placing the concrete as quickly as possible, as the water was likely to rise at any time and injure the forms. It proved very satisfactory on this job. The objection to most bottom-dumping cars is that the axles have to be placed so far apart that the wheels bind in making curves. With this car the body is swung above the axles, the axles being protected by a V-shaped covering, which sheds the falling concrete being kept

Carborundum File.

Dealers in and users of files will find their attention attracted to the accompanying illustration of the carborundum file manufactured by the Carborundum Company, Niagara Falls, N. Y. This company describes the file as follows:

"The carborundum file continues its work where the steel file is forced to leave off; that is, besides doing all of the work a steel file can do, and doing it better and quicker, the carborundum file will cut metals which the steel file cannot touch.

"The carborundum file is a solid block of carborundum 13 inches long, 1½ inches wide and 1½ inches thick. One end is rounded and the other fitted with a durable wooden handle. For filing castings or soft



CARBORUNDUM FILE.

scoured by each load dumped. The axles can be placed close together, making a 22-inch wheel base if desired. As the bottom is 14 inches wide, the doors are seven inches wide, allowing them to readily open above the axles without swinging the body too high.

"While the cost of this car is more than the cost of an ordinary car, being the difference of the addition of the hinged bottom and dump levers, not a very expensive item, the usefulness of the car is increased in proportion greater than the cost. The body can be used separate as a bucket dumping at the bottom, and is as good a

metals it does the work much quicker and better than the steel file, and for touching up case-hardened parts and removing the scale from the harder metals there is nothing to equal it. Incidentally the carborundum file will outlast 20 steel files.

"Carborundum, as is well known, is the hardest and sharpest of all abrasive materials. Every little grit or grain in the carborundum file is just as hard and as sharp as a diamond, and they cut fast and clean, never wearing smooth and allowing the file to fill or glaze.

"In general machine-shop work the carborundum file fills a long-felt want, as it

not only does better and faster work than the steel file, but is much more economical in the end. It is made in a convenient size and shape, and of just the proper grit to be efficient in all around work."

New Rotary House Pump.

A new type of house service pump has recently been introduced into this country from Germany, where it is in extensive use. The pump is the invention of Herr Wilhelm von Pittler of Berlin, and the American rights have been secured by the Rotary House Pump Co., 103 Park avenue, New York. (See two accompanying views.)

The pump consists of a rotating cylinder or drum of bronze, rigidly secured to the shaft and revolving between two end cams having parallel curved faces. The cylinder has rectangular slots in its surfaces, which are machined out parallel to the axis and contain sliding vanes. The whole is enclosed in a casing containing ports, which connect the pumping chambers with an outlet and inlet. The two end faces of the rotating cylinder are plain surfaces, perpendicular to the shaft. The end cams have special surfaces, which form a series of working chambers around the shaft at either end of the rotating cylinder. The ends of the vanes enter these working chambers by reason of the

shows that nearly all water contains grit or solid, which causes a certain amount of wear on the ends of the vanes butting against the cam heads. The pump is constructed, for this reason, with vanes divided through the center. Pressure is introduced between the two halves by leading a small channel from the discharge to a groove, which entirely surrounds the rotating cylinder. By this means the vanes are kept always in contact with the cams at either end, and the wear on the ends of the vanes is automatically taken up, maintaining the efficiency of the pump. The rotating cylinder being of bronze, and the vanes of suitable material, the sticking or rusting together of the moving parts is entirely eliminated. The balancing effect of the pressures on the sliding vanes, as described, reduce ordinary wear to a minimum. With this split vane construction the pump maintains its volumetric efficiency even when pumping mud and sand.

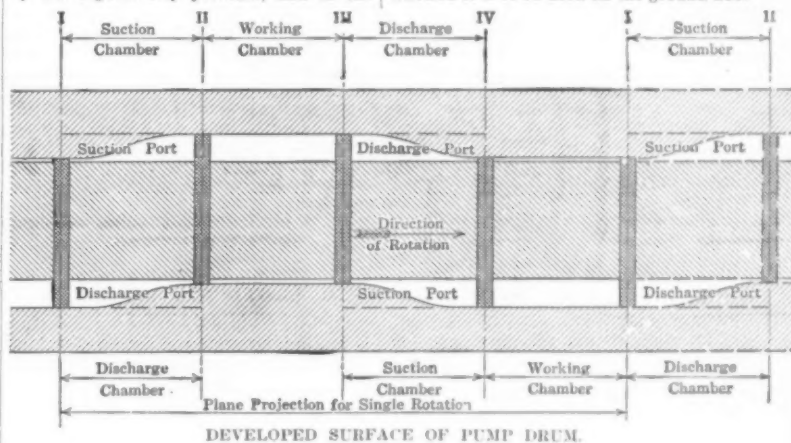
As there are always two vanes moving through the pumping chambers, the action is like that of a cylinder of infinite length with a piston moving through it forcing the water ahead of it at constant speed. The water issues from the pump without spurts or vibrations, which is a great advantage, particularly where the pump is used for fire engines, as the steam ejected from the hose "carries" much farther than one of an unsteady character, which is broken up at the nozzle when it comes in pulsating contact with the air. Furthermore, pipes or hose are much less liable to burst under the constant pressure, and the familiar "throbbing" of pumping systems, operating by reciprocating pistons, is entirely eliminated; also the friction losses in the hose are reduced. Simplicity of construction, the lack of heavy reciprocating parts and the almost frictionless sliding of the vanes give a high efficiency over a wide range of speeds. High efficiency, high speed pumps are therefore possible, and the Pittler rotary pump is designed for direct connection to any type of electric motor, doing away with belts or gearing. The light-moving parts have little inertia or starting friction, and require no excessive power at starting. They also eliminate the necessity for heavy foundations. The head, against which the pump is desired to deliver water, depends on the size of the motor and the strength of the materials of which the pump is constructed. In other words, the pump will deliver against heads of very wide limits by simply coupling it to the proper-sized motor.

The lubrication is entirely automatic, and as reliable as that of standard electric motors, as it is only necessary to lubricate the shaft which runs in ring-oiling bearings of ample dimensions. There being no valves or stuffing-boxes, the pump is reliable during continuous operation, and will not dry out if allowed to remain idle. The suction lift is exceedingly high, 25 feet being realized under ordinary conditions without the use of a foot valve. The body of the pump never has to be filled or primed when starting up, as with centrifugal pumps, and the load is brought on gradually through the suction lift. This is an important advantage, especially with large pumps operated by induction motors. Pumps in service for two or three years, pumping ordinary water, show no appreciable wear on either shafts, vanes or cams, operating at the same duty as when installed. The Pittler pump shows high efficiencies, even up to 85 per cent, in the small sizes.

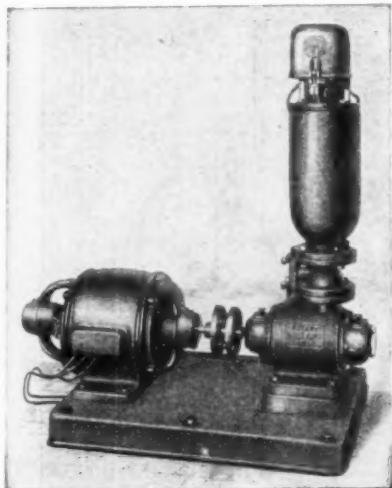
This pump is applicable to all classes of pumping work, combining the advantages of rotary action as with turbine or centrifugal pumps with the positive delivery of a displacement or piston machine.

Although the Rotary House Pump Co.'s standard pump may be used in substitution for other types for house service and similar work in connection with storage water tanks, it is also adapted for operating without tanks under all conditions of suction and head. The Rotary House Pump Co.'s no-tank system provides a reliable and constant water supply, without intermediate water storage tanks, for office buildings, hotels, apartment-houses and other buildings too high to be served by the regular city pressure, and in the

The new house water-pump system is now on the market for general water supply. By its use, the disadvantages of the tank system, such as freezing in winter and supplying warm, stagnant, germ-infested water in summer are entirely eliminated. There are no complicated mechanism and wiring system to maintain the water pressure; no work by the motor except when the water is actually being drawn off. In a tank system all of the water has to be pumped to the roof tank, whether it is to be used on the ground floor



DEVELOPED SURFACE OF PUMP DRUM.



A 900-GALLON HOUSE SERVICE PUMP.

cam surface at the opposite end. There is a port in the casing over the first part of each working chamber connected to the inlet. As a vane moves under this port water is sucked in between the rotating cylinder and the cam, to be discharged through a second port at the other end of the chamber and so to the discharge pipe. While the vane is under either port, it is moving axially, and is subjected to equal pressures on each side. Between ports the surfaces of the cams are parallel to the ends of the rotating cylinder, and the vane has no axial movement. In other words, there is no sliding of the vanes in the cylinder except when they are under open ports, and therefore submitted to equal pressures on both sides. Whenever the vane is under load and pushing the water forward in the pumping chamber it is moving along the flat part of the cam head while it rotates with the cylinder, but does not slide in the same. In this pump all moving parts are evenly balanced about the shaft, and there is no eccentric action of the vanes. These features differentiate the Pittler pump from all other types of rotary pumps, where the vanes must move under load and unbalanced pressures and inevitably wear out from the excessive friction.

If perfectly clear water was at all times being drawn in and discharged from the Pittler pump, solid vanes would give satisfactory service. But average practice

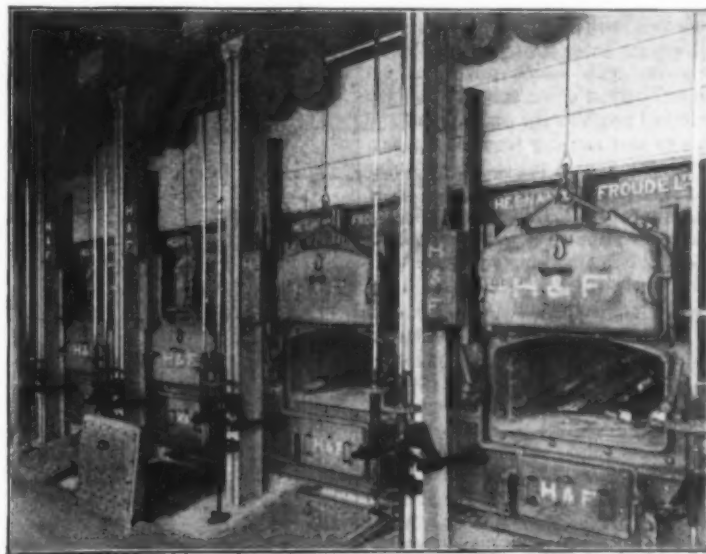
country gives an ever ready service to farm houses, summer resorts or any buildings where no regular water supply is available.

The apparatus is entirely self-contained, and consists of an electric motor direct connected to a rotary pump. Above the pump (or in some types underneath) is a small pressure chamber or reservoir partly filled with air, which is compressed by the pressure of the water from the pump. At the top of the air chamber an automatic switch is actuated by means of a diaphragm, which throws in or cuts out the current, depending upon this pressure. The automatic switch is adjusted to operate between any two given pressures, starting it at the upper one, so that a pressure within these limits is maintained at all the taps and faucets in the building. Water drawn from any part of the system will, after a few seconds taken to clear the pipes, come fresh from the low-pressure main or well. To make a system of this kind practicable, the pump must be effi-

cient, silent, reliable and capable of delivering a steady flow of water. The saving in electrical energy is therefore considerable, and the extra piping to the elevated tank is eliminated. The first cost and maintenance of large tanks extra piping to the tank and extra wiring from the tank switch to the basement pump is avoided. The pump and control are all self-contained, and occupy but little space in the most convenient location. The attention required is negligible, and the only maintenance charge is the occasional renewal of oil in the motor and pump bearings.

High Temperature Refuse Destructor

For several years the city of Montgomery was confronted with the problem of the sanitary disposal of its refuse, and the question was carefully studied by the officials. Gaston Gunter, who was Mayor of the city until October, completed the investigation and the necessary steps were taken to install a refuse disposal system. Mayor Gunter spent several years in prac-

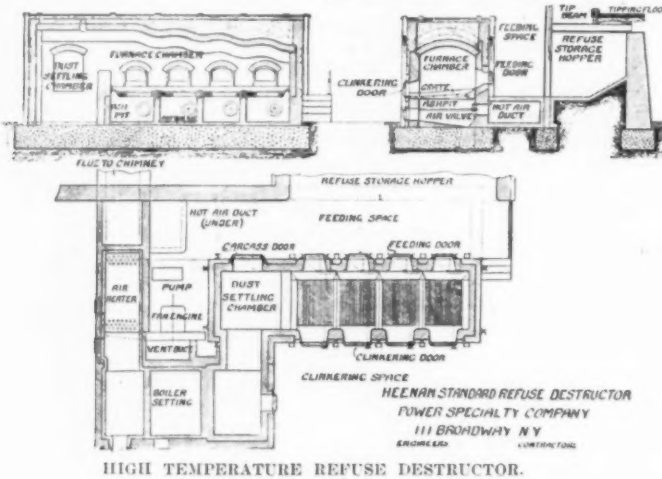


HIGH TEMPERATURE REFUSE DESTROYER.

tical engineering, and therefore was qualified to judge of the relative merits of the different methods advocated. He decided that a high temperature refuse destructor of the type used by New York, Buffalo, Milwaukee, Seattle, Westmount and Vancouver was the most sanitary and economical

cient, silent, reliable and capable of delivering a steady flow of water. The manufacturer claims that the pump not only fulfills all of these requirements, but that the system is very much cheaper to install and operate than any other electrically-driven pump of equal capacity.

plant for Montgomery, and negotiations were closed with the Destructor Company, 111 Broadway, New York, for the construction of a Heenan high temperature refuse destructor of 60 tons capacity per 24 hours.



HIGH TEMPERATURE REFUSE DESTROYER.

This plant is now nearing completion. It is adjacent to the city water pumping plant, and is housed in an attractive building. (See three accompanying illustrations.)

The destructor proper consists of one unit of 60 tons capacity per 24 hours, containing four grates, each having its own independent ash pit. The forced draft of preheated air is supplied and controlled independently by a valve at the entrance to each ash pit. An accompanying view represents in general the arrangement of the burning grates, dust settling and combustion chamber, and location of the boiler and air heater. The forced draft is supplied by means of a turbine-driven fan. The air is taken from various points in the building through a system of ventilating ducts, and then forced through the pre-heater, which is located in the main flue, to the chimney, and so arranged that the waste gases escaping from the boiler pass the heater and give up the required heat to the air to increase its temperature to about 300 degrees Fahr. From the air heater the air is led through ducts to the ash pits. This system, in addition to furnishing a forced draft of heated air, also insures the thorough ventilation of the building, since the amount of air required per hour for combustion is about eight times the total air contents of the building, and there is therefore a constant inrush of air into the building, and no air escapes except through the stack. This insures perfect ventilation and comfort of the men operating the plant, and precludes the possibility of any odors or dust escaping from the building.

The main floor of the building is about 15 feet below street level, and a short bridge connects one street with the tipping floor of the plant. The refuse carts drive directly into the building and dump their contents into the storage hoppers. Back of each grate is provided a drying hearth, and over each drying hearth is located a fixed container of about one cubic yard capacity, the top of which is flush with the feeding floor and the storage hoppers, a mechanically-operated door forms the bottom of each of these containers, and at the same time closes the opening into the drying hearth. These containers are filled and their contents dropped onto the drying hearth by the men on the clinkering floor, and from the drying hearth the refuse is raked forward onto the grates as required. When all of the organic and combustible matter has been completely burned out of the refuse the residual is in the form of a hard clinker, innocuous and free from all organic matter, and is broken up by slice bars and pulled out of the furnace and

dropped through trapdoors (see accompanying view) direct into a car running on tracks in a tunnel below the clinkering floor. This car is hauled out and up an incline by cableway and automatically dumped into a crusher, where the clinker

is crushed, screened and deposited in bins ready for use as road ballast or for concrete work.

It should be especially noted that the

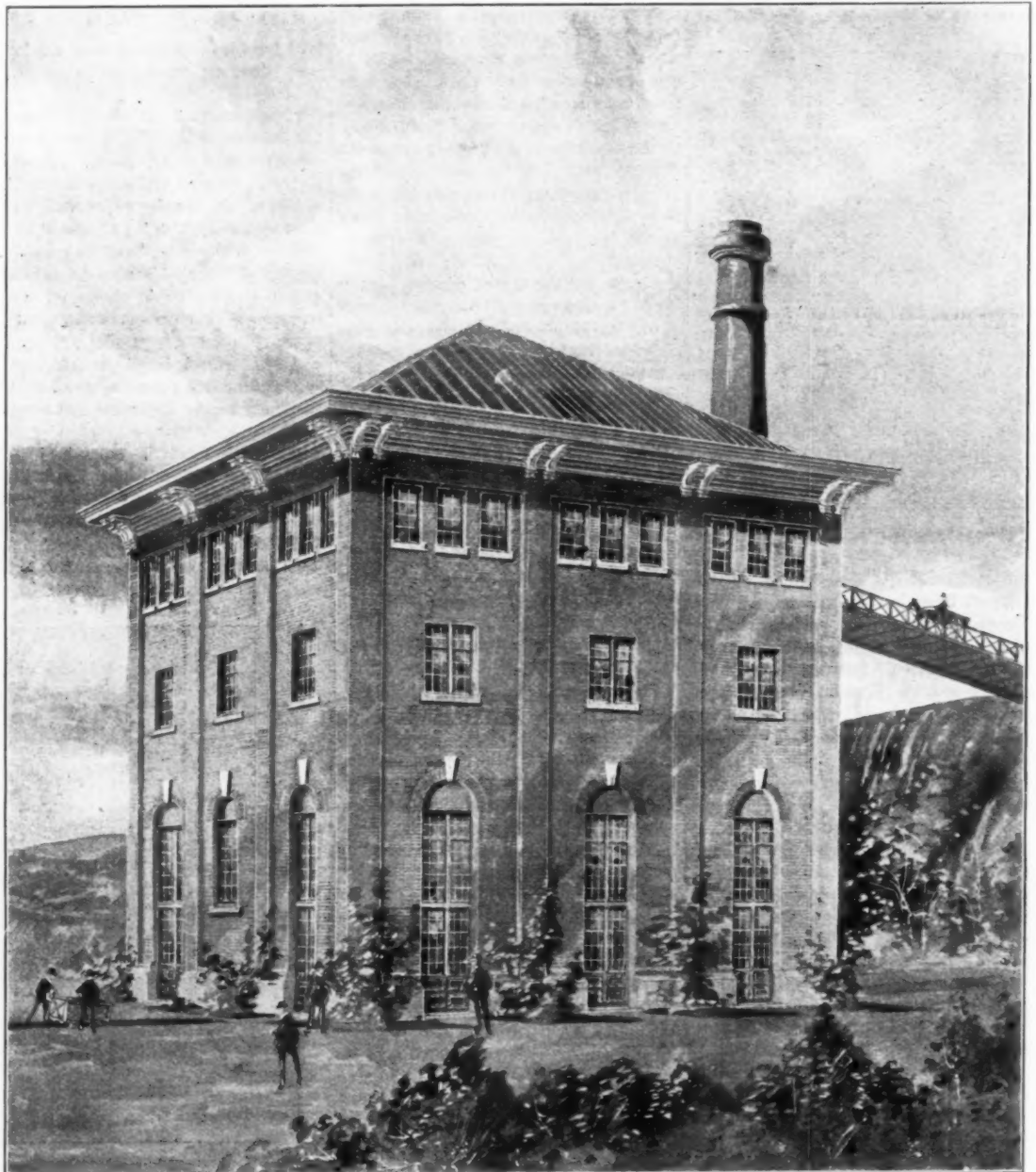
chamber being about 1700 degrees Fahr., and the minimum temperature never falling below 1250 degrees Fahr. The hot gas of combustion is passed through a large dust-settling chamber, so that any dust which may be carried in suspension will be deposited. The gas then passes through a water-tube boiler of 180 horse-power and its temperature reduced to about 500 degrees, in doing which about 6000 pounds of steam at 160 pounds pressure is generated per hour. The boiler is equipped with the well-known Foster superheater, which adds 125 degrees superheat to the steam. It is proposed to carry this steam a distance of about 150 feet to the city's pumping station, where it will be utilized to operate the pumping engines. The cost of the coal saved at the pumping station by the use of this steam will be more than sufficient to pay the cost of operating the destructor plant. As the plant is centrally located, a further saving over the present method of dumping the refuse will be secured by reason of the reduced length of haul, and it is also expected that another saving to the city will be secured by the utilization of the crushed clinker in place of broken stone.

The plant is served by a radial brick chimney four feet diameter in the clear at

Lockwood's Directory.

The thirty-sixth annual edition of Lockwood's Directory of the paper, stationery and allied trades of the United States and Canada has been issued by the Lockwood Trade Journal Co., 150 Nassau street, New York. For over 30 years Lockwood's Directory has been recognized as a standard book of reference in the trades it represents, and in this edition pains have been taken to make it as accurate and trustworthy as possible. The old departments have been enlarged and the classified lists have been made fuller, while the classification of paper dealers by which the character of the business is clearly indicated has this year been revised and improved. Many companies heretofore unclassified have been brought under the new arrangement. The publication contains a total of 769 pages, and is attractively and durably bound in cloth. Its price is \$3, express prepaid.

The officers elected at the recent convention of the National Hardware Association are Messrs. J. D. Moore, Birmingham, Ala., president; Bruce Hayden, San Francisco, and W. D. Taylor, Cleveland, vice-presidents; T. J. Fernley, Philadelphia, secretary-treasurer, and A. J. Behler, Pitts-



HIGH TEMPERATURE REFUSE DESTROYER AT MONTGOMERY.

whole process is carried on without any nuisance from odor, smoke or dust. The combustion is as nearly perfect as possible, the average temperature in the combustion

the top by 100 feet high, built by the Heine Chimney Co. The destructor building is in accordance with plans and specifications prepared by Robert W. Gibson of N. Y.

burg; Harry L. Daten, Boston; C. A. Knapp, Sioux City; T. G. Walter, St. Paul, and J. H. Boucher, Rochester, executive committee.

Construction Department

TO OUR READERS!

In order to follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and when this is necessary the statements are made as rumored or reported, and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be shown on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular.

"In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned."

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year. On all advertising contracts in the Manufacturers Record for three months or longer a subscription for the contract period to the Daily Bulletin is included.

BRIDGES, CULVERTS, VIADUCTS

Ga., Waycross.—Atlantic Coast Line Railroad, E. B. Pleasants, chief engineer, Wilmington, N. C., is awarding contracts for construction of proposed concrete and steel viaduct across Altamaha River, Georgia, to replace present wooden trestle.

Miss., Jackson.—J. Noma Jordy of New Orleans, La., is promoting construction of three bridges in connection with 48 miles of railroad from Jackson to Carthage; two bridges across Pearl River and another over Yockanookany River; bridge at Jackson will be large.

Mo., Springfield.—City will vote November 21 on issuance of \$100,000 of bonds for construction of bridges and culverts. Address The Mayor.

Okla., Ardmore.—Arbuckle & Western Railway, Oscar O. Ayres, chief engineer, will construct several short steel or concrete bridges and probably one trestle on proposed railroad.

Okla., Muskogee.—Muskogee county will vote November 22 on issuance of \$140,000 of bridge bonds. Address County Commissioners.

Okla., Nowata.—Nowata County Commissioners awarded contract to Canton (O.) Bridge Co. at \$44,000 to construct 25 bridges.

Tenn., Harriman.—Harriman, Knoxville & Eastern Railroad Co., W. J. Clarke, chief engineer, Harriman, will construct 70-foot through girder across Little Emory River.

Tex., Burnet.—Burnet county will construct

three steel bridges—one across Labesas River near Oakallen, one near Joppa and one over Colorado River at Bluffton; latter will be a line bridge 460 feet long and will be constructed in connection with Llano county; plans and specifications not ready for 60 days; D. G. Sherrard, Commissioner of Precinct No. 1, Burnet county. (Bond issue recently noted.)

Tex., Cameron.—Milam County Commissioners awarded contract to C. Q. Horton, Austin, Tex., to construct bridge across Prushy Creek near Thordale.

Va., Richmond.—Henrico County Supervisors contemplate constructing bridges at point where Broad-street Rd. crosses tracks of Richmond, Fredericksburg & Potomac Railroad.

Va., Madison.—Bids will be received until November 22 for construction of three steel bridges, two 50 feet long and one 40 feet long, in Madison county; P. St. J. Wilson, State Highway Commissioner, Richmond, Va. (See "Machinery Wanted.")

Va., Petersburg.—Virginia Bridge & Iron Co., Roanoke, Va., has contract to construct viaduct requiring 450 tons of fabricated steel.

W. Va., Moundsville.—Marshall County Commissioners awarded contract to West-haver Bridge Co., New Philadelphia, O., at \$3800 to construct two-span reinforced concrete bridge across Fish Creek at Bannan, W. Va.

CANNING AND PACKING PLANTS

Fla., Miami.—Jaudon Bros. will establish fruit-packing plant; machinery reported purchased.

Fla., Tampa.—Tampa Citrus Growers' Association (previously reported having awarded contract to Stubbs & Overman, Tampa, for erection of packing plant) will erect building 80x100 feet; ordinary construction; cost \$5125; equipment will include electric motors, automatic dumps, water circulation pumps, dripping racks, driers, grading belts, sizers, box conveyors, mallets, elevators and electric-lighting system; plans by Bonfoey & Elliott, Tampa.

Md., Havre de Grace.—Snider Packing Co. or Cincinnati, O., is reported as considering establishment of cannery.

S. C., Georgetown.—Georgetown Gin & Canning Co. will establish cannery for vegetables, strawberries, etc.

Tex., Brownsville.—Theodore Stegner of Kansas City, Mo., representing Eastern capitalists, proposes constructing canning and packing plant, etc. (See "Ice and Cold-storage Plants.")

Tex., Bay City.—F. W. Strauter will establish cannery.

Tex., Figgdale.—Figgdale Preserving Co. incorporated with \$10,000 capital stock by J. E. Boren, C. E. Boren and others.

Tex., Mission.—D. A. Randall is, it is reported, interested in plan to establish cannery.

CLAYWORKING PLANTS

Ky., Ashland.—Fire Bricks.—Ashland Fire Brick Co. completed 80x300-foot storage building with capacity of 5,000,000 bricks; this is first work toward rebuilding plant at ultimate cost of \$60,000.

Mo., Kansas City.—Terra-cotta.—Southwestern Terra-Cotta Co. organized with \$150,000 capital stock; A. F. Brooker, president; plans establishment of plant with weekly capacity of 250 to 300 tons.

COAL MINES AND COKE OVENS

Ala., Altoona.—Altoona Coal & Iron Co. incorporated with \$10,000 capital stock; R. J. Wheeler, Birmingham, Ala., president; M. Y. Clark, Altoona, vice-president and superintendent; J. E. Ross, Birmingham, Ala., general manager and treasurer.

Ala., Galloway.—Jaggen Creek Fuel Co. incorporated with \$20,000 capital stock by W. P. Yeatman, Frank G. Morris and Peyton Norwell.

Ky., Pike County.—Consolidation Coal Co., Continental Bldg., Baltimore, Md., and 1 Broadway, New York, completed purchase of 160,000 acres coal land; purchase price, \$4,500,000; property in Elkhorn region—Floyd, Knott, Letcher and Pike counties; will construct 30-mile railway from northern end of lands to Shelby, on Chesapeake & Ohio Railway; Louisville & Nashville Railway has

begun construction of 90-mile railway, to cost \$4,000,000, from Jackson to southern end of property; these railways will provide transportation facilities for coal output; Consolidation company has engineers planning development on basis of 4,000,000 tons annual capacity; actual construction of plants to begin next spring. (Lately mentioned.)

Ky., Harlan County.—Wisconsin Steel Co. (subsidiary to International Harvester Co., Michigan Ave. and Harrison Sts., Chicago, Ill., is progressing with developments previously detailed; 20,000 acres coal land; installing machinery for daily output 2000 tons coal and constructing 300 coke ovens; has mills to manufacture lumber for construction, etc.; expenditure estimated at \$500,000; will soon be purchasing heavy machinery and other equipment; address all correspondence to W. C. Tucker, superintendent, Hotel Touraine, Big Stone Gap, Va.

Ky., Pulaski County.—Geary Land & Development Co. incorporated with \$130,000 capital stock by John A. Geary, Michael Corbett, John F. Scanlan, T. T. Supple, all of Chicago, Ill., and others; will develop 8000 acres coal and timber land; main offices in Lexington, Ky.

Okla., Henryetta.—McKay Coal & Mining Co. incorporated with \$9000 capital stock by Samuel McKay, Sr., Samuel McKay, Jr., Duncan McKay, A. M. Patterson and H. Meinholz.

Tenn., Newcomb.—Jellico Cannel Co. will build tiphouse with several chutes; construction begun; has awarded contract for two additional cutting machines to increase mine output.

Va., Tazewell.—Jewell Ridge Coal Corporation increased capital stock from \$200,000 to \$300,000.

W. Va., Coalwood.—Virginia Pocahontas Coal Co., Geo. L. Carter, president, Johnson City, Tenn., is reported as to expend \$750,000 for further developments; advises that plans are not ready for publication and development will not begin until next spring.

COTTON COMPRESSES AND GINS

Ga., Blakely.—Georgia Cotton Oil Co., branch of American Cotton Oil Co., 27 Beaver St., New York, awarded contract to Biakely Lumber Co., Blakely, for erection of cotton gin to replace plant recently reported burned; T. S. Chandler, local manager; loss \$12,000.

N. C., Kittrell.—Kittrell Union Gin Co., recently reported incorporated with \$25,000 capital stock, has plans by Continental Gin Co., Birmingham, Ala., for ginner; will erect three buildings—22x40x19 feet, 24x30x19 feet and 16x24x9 feet; semi-fireproof construction, day labor; machinery purchased; daily capacity 20 bales cotton; Andrew Perkinson, president; J. W. Averton, vice-president; James P. Hunt, secretary-treasurer.

Tex., Houston.—Southland Cotton Co. will erect building and install machinery for cleaning damaged cotton; cost \$2500.

Tex., Palestine.—Palestine Ice, Fuel & Gin Co. will rebuild cotton gin recently reported burned; fireproof construction; cost \$10,000; capacity, 1000 bales annually.

COTTONSEED-OIL MILLS

Ga., Cordele.—Armour & Co. of Chicago, Ill., will establish, it is reported, oil mill and fertilizer factory to cost \$75,000.

Miss., Meridian.—Meridian Fertilizer Co. will rebuild oil mill and seedhouse recently reported burned; loss \$150,000.

Va., Portsmouth.—Portsmouth Cotton Oil Refining Corporation will rebuild refinery proper, lately burned at loss of probably \$80,000; daily capacity, 1500 to 1800 barrels oil; steel work, tanks, etc., required for rebuilding; engineer in charge, Hermann Aspegren, Portsmouth; president, John Aspegren, Produce Exchange Bldg., New York. (Lately mentioned. See "Machinery Wanted.")

DRAINAGE AND IRRIGATION

Ark., Jonesboro.—Birch Creek Drainage District No. 1 awarded contract to J. B. Walker at 15¢ cents per cubic yard to construct drainage canal, 5 miles long, 3 feet wide at bottom and 15 feet at top, with average depth of 3 feet; about 50,000 cubic yards of earth to be dredged.

La., Lockport.—Golden Ranch Land & Development Co. incorporated with \$1,000,000 capital stock to reclaim 50,000 acres it controls in Lafourche Parish near Bayou Lafourche; 2500 acres are in cultivation (sugar) and balance consists of prairie lands, which will be reclaimed; company will also continue sugar mill; C. D. Garnett, St. Louis, Mo., is president; Frank B. Thomas of Zengel, Thomas & Suthon, and Ernest M. Loeb are vice-presidents; Fred P. Morrill, treasurer; C. M. Morrill, secretary, all of New Orleans, La. (Previously mentioned.)

Miss., Houka.—Houka Creek Drainage District No. 2, Chickasaw county, Miss., organized with Messrs. Johnson, Peden and Waldrop as commissioners, Houston, Miss., will reclaim 1100 acres of land; surveys have practically been made; main canal (continuation of Houka Drainage Canal partly completed) will be 20 feet wide, 5 feet deep and 4 miles long; commissioners will receive bids; Charles L. Wood, engineer in charge, Columbus, Miss.

N. C., Chadbourn.—Chadbourn Drainage District awarded contract to Brett Engineering & Contracting Co., Wilson, N. C., for constructing 13 drainage canals, ranging from 4 feet to 16 feet wide and from 2 feet to 8 feet deep; cost \$20,000. D. Lindsay Struthers will supervise construction. (Recently noted.)

N. C., Chadbourn.—Chadbourn Drainage District, D. L. Struthers, superintendent of construction, awarded contract to Brett Engineering & Contracting Co. for construction of drainage canals, requiring excavation of 140,720 cubic yards of earth; C. R. Humphreys is engineer of district. (Recently mentioned.)

Tex., Pecos.—Dr. H. H. Harrington, director of State Experiment Stations, has plans for draining and irrigating 50-acre tract of land; M. L. Swinehart of Pecos has been engaged to make contour surveys, locate canals, laterals, etc.; Superintendent Homes of Denton State Experiment Station will have temporary charge of work.

ELECTRIC LIGHT AND POWER

Ala., Camp Hill.—City voted October 24 on \$17,000 bond issue for electric-light plant. Address Town Clerk.

Ga., Cairo.—City contemplates enlarging electric-light plant. Address The Mayor.

Ga., Moultrie.—City will install 200-horsepower engine and 100-kilowatt generator and switchboard, doubling capacity of electric-light plant; contract for machinery reported awarded. Address The Mayor.

Ky., Lexington.—Lexington Interurban & Street Railway Co. is having surveys made for construction of electric plant to cost \$250,000; not ready to announce details.

Mo., Centralia.—Centralia Light & Power Co. incorporated with \$50,000 capital stock by R. H. Baldridge, S. M. Locke and E. R. Locke; is constructing 14 miles of transmission line to connect with Mexico Power Co.'s plant at Mexico, Mo.; has placed order for electrical equipment.

Okla., Cherokee.—City will make extension to electric-light plant and water-works; A. J. Titus, Mayor.

Okla., Forker.—City awarded contract to C. A. Rees to construct electric-light system.

S. C., Darlington.—Darlington Water & Electric Co., recently noted to make improvements to electric-light plant, will expend \$30,000 to erect brick building; W. W. Cocheron, engineer in charge.

S. C., Spartanburg.—The Electric Power & Manufacturing Co. will increase facilities of power plant in Spartanburg and establish sub-station in Gaffney, S. C.; plans development of 2500 additional horse-power and installation of more machinery; F. H. Knox is general manager.

Tex., Bay City.—Bay City Ice & Light Co. incorporated with \$25,000 capital stock by C. G. Foulks, W. M. C. Foulks and John M. McCorbett.

Tex., Hubbard City.—Union Central Light & Ice Co. will install 250-horse-power engine generating set and 250-horse-power boiler; contracts awarded; will install oil-burning fuel system; contract not awarded. (See "Machinery Wanted.")

Va., Christiansburg.—J. W. Glass, Vernon Hill, Va., purchased and will continue plant and franchises of Montgomery Electric Co.,

Including lighting system in Christiansburg and Cambria, Va., and water-power plant, farm and mill at Grayson Town, Va.

Va., Great Falls.—Commissioners District of Columbia, William V. Judson, engineer commissioner, 427 District Bldg., Washington, D. C., contemplates constructing water-power-electrical plant to supply Washington; have tentative plan; will ask Congress for \$10,000 for surveys, etc.; will not make estimates for some time; about 6000 horsepower available without storage and 8000 horse-power with storage.

Va., Ocoquan.—Commissioners District of Columbia (Cuno H. Rudolph, John A. Johnston and William V. Judson), District Bldg., Washington, D. C., will open bids November 12 for installation of electric plant at Ocoquan workhouse; plant will furnish 200 lights for building and 50 for grounds; estimated cost \$3500. (See "Machinery Wanted.")

Va., Virginia Beach.—City contemplates granting franchise for electric-light plant; W. J. Wright, Mayor.

Va., Woodstock.—Manufacturers' Light & Power Co. incorporated with \$50,000 capital stock; R. S. Funk, president; C. L. Knelsley, secretary, both of Strasburg, Va.

FERTILIZER FACTORIES

Ala., Tallahassee.—Elmore Fertilizer Co. incorporated with \$15,000 capital stock by S. P. Starrs, H. S. Holloway and others.

Ga., Cordele.—Armour & Co. of Chicago, Ill., will, it is reported, establish fertilizer plant and oil mill; cost \$75,000.

Ga., Doerun.—Doerun Fertilizer & Ginning Co. will erect fertilizer factory; 7000 feet floor space.

Ga., Vidalia.—A. D. Strobhar of Savannah, Ga., plans establishment of fertilizer factory.

N. C., Wilmington.—Cooper Guano Co. incorporated with \$100,000 capital stock by W. B. Cooper, I. W. Cooper and W. R. Surles.

S. C., Newberry.—Newberry Fertilizer Co. incorporated with \$25,000 capital stock by C. T. Skinner, Charles J. Purcell, J. A. Burton and others.

S. C., North Augusta.—North Augusta Warehouse & Fertilizer Co. incorporated with \$10,000 capital stock by J. C. Lamar, P. L. Nurnberger and Nolan Bowden.

Tenn., Nashville.—American Fertilizer Co. incorporated with \$100,000 capital stock by S. S. Clawson, A. H. Robinson, W. W. Berry and others.

FLOUR, FEED AND MEAL MILLS

Ga., Cornelia.—T. J. Bentley contemplates erection of roller flour mill. (See "Machinery Wanted.")

Md., Oakland.—Dixon & Kelso will install four-stand wheat flour mill with daily capacity of 60 barrels flour.

N. C., Richfield.—Springs Mills Co. incorporated with \$25,000 capital stock by M. S. Pence and others to grind small grain.

Tenn., Shooks.—Nichols Bros. will establish grist and sawmill.

Tex., Marfa.—Silver Hill Mill & Elevator Co. incorporated with \$250,000 capital stock by R. K. Young, T. C. Crosson and others.

FOUNDRY AND MACHINE PLANTS

Ala., Gadsden.—Pipe and Fittings.—Gadsden Pipe & Fittings Co., Birmingham, Ala., will rebuild small plant reported burned.

Ga., Atlanta.—School Shop.—Georgia School of Technology contemplates enlarging machine shop; State will appropriate \$35,000 and school \$15,000.

Md., Baltimore.—Machine Shop.—Black & Decker Manufacturing Co. organized with \$25,000 capital stock; installing complete shop equipment for high-class machine work; S. Duncan Black, president; Alonzo G. Decker, vice-president and engineer; Louis Rehberger, Jr., secretary, treasurer and superintendent; address, 113 South Calvert St.

Md., Baltimore.—Structural Shop.—Dietrich Bros., 345 North St., will build plant on block bounded by Davis and Pleasant Sts.; erect main building of brick and stone with concrete foundation, five stories high, 31x114 feet; another building, three stories high, of ornamental iron, brick and stone, 20x115 feet; another, one story high, of structural and corrugated iron, 115x200 feet; equipment to include two electric cranes of 55-foot span and 15 to 20 tons capacity, punches and shears, drill presses, etc., for complete structural shop.

Miss., Columbia.—Machines.—Excelsior Foundry & Machine Co. incorporated with \$20,000 capital stock by C. B. Rice, W. B. Grenaud and others.

Mo., Kansas City.—Sashweights.—Sheffield Sashweight & Manufacturing Co. incorpo-

rated with \$7500 capital stock by Solomon Stoddard, George T. Cook and George P. Pierce.

S. C., Greer.—Iron.—Greer Iron Works increased capital stock from \$5000 to \$10,000.

Tex., Amarillo.—Iron Foundry.—J. F. McGovern, Fort Worth, Tex., contemplates establishing iron foundry.

Tex., Dallas.—Iron Works.—Lone Star Iron Works incorporated with \$100,000 capital stock by R. Kinsell, J. H. Leiber, W. S. Myers and others.

GAS AND OIL DEVELOPMENTS

Ark., Faith.—Faith Gas & Oil Co. organized with \$300,000 capital stock by F. C. Holland, H. A. McCoy, H. C. McGaughy, all of Pine Bluff, Ark., and others.

Ark., Star City.—Star City Oil & Gas Development Co. incorporated with \$200,000 capital stock; F. C. Holland, president; R. H. Lucas, vice-president; H. G. McGaughy, secretary; C. M. Philpot, treasurer.

La., Lafayette.—Martin-Lafayette Oil Co. incorporated with \$5000 capital stock; William Campbell, president; William Clegg, vice-president; J. M. Keith, secretary; I. B. Bendell, treasurer; A. M. Martin, general manager.

La., Shreveport.—Standard Oil Co., 26 Broadway, New York, is understood to have purchased holdings of Benedum-Trees Oil Co. at \$9,000,000; properties include 104,000 acres land with wells producing 12,000 barrels oil daily in Caddo parish. (Benedum-Trees Oil Co. was reported recently as to expend \$500,000 to build refinery, lay 20-mile pipe line, establish machine shop, etc.)

Okla., Tulsa.—Loco Oil Co. incorporated with \$12,000 capital stock by P. J. White and others.

Okla., Tulsa.—Ora Oil Co. incorporated with \$12,000 capital stock by P. J. White of Tulsa, H. F. Sinclair and E. W. Sinclair of Independence, Kans.

Tex., Bay City.—Square Deal Oil Co. incorporated with \$16,000 capital stock by T. J. Poole, R. O. Middlebrook and A. M. Anderson.

Tex., Marlin.—Marlin-Reagan Oil Well Co. organized; W. Z. Burke, president; W. M. Gunnell, vice-president; C. Ward, secretary-treasurer; leased and will develop mineral rights on 8500 acres of land.

W. Va., Buchannon.—Grant Oil & Gas Co. incorporated with \$25,000 capital stock by W. H. Fisher, G. M. Fleming, C. I. Farnsworth, H. R. Clark and others.

W. Va., Huntington.—Albion Oil Co. incorporated with \$16,000 capital stock by W. S. Reed, Thos. J. Miller, J. W. Davis and others.

W. Va., Logan.—Logan Light & Fuel Co., Thomas H. Harvey, president, Huntington, W. Va., recently reported incorporated with \$50,000 capital stock, will develop 900-acre tract gas and oil property; begin drilling within 20 days; will lay main and pipe gas seven miles to Logan.

West Virginia.—John Ebbert Wilson of Chicago, Ill., and associates are reported as negotiating for construction of gaspipe line from West Virginia to Chicago.

ICE AND COLD-STORAGE PLANTS

Fla., West Palm Beach.—Company organized with \$25,000 capital stock by M. P. Hazel and others to establish 15-ton ice plant and cold-storage plant with eight or ten rooms; establish electric-light and power plant later.

La., Alexandria.—C. J. Pope, Bunkie, La., will not establish cold-storage plant as was recently noted.

Miss., Grenada.—T. M. Street, care of Business League, will install 25-ton ice plant recently noted. (See "Machinery Wanted.")

Tex., Bay City.—Bay City Ice & Light Co. incorporated with \$25,000 capital stock by C. G. Foulks, W. M. C. Foulks and John M. McCorbett.

Tex., Brownsville.—Theodore Stegner of Kansas City, Mo., representing Eastern capitalists, proposes constructing ice and cold-storage plant and canning and preserving plant.

Tex., Texas City.—R. H. Stenls of Galveston, Tex., will not establish ice plant, as was recently stated.

IRON AND STEEL PLANTS

W. Va., Wheeling.—Iron Furnace.—Carr Furnace Co. incorporated with \$10,000 capital stock by Peebles Tatum, A. S. List, C. E. Blue, W. M. Carr and S. M. Noyes.

LAND DEVELOPMENTS

Ark., Walnut Ridge.—Dowell Land Co. incorporated with \$50,000 capital stock; S. C.

Dowell, president; Alice Dowell, vice-president; W. A. Dowell, secretary.

Arkansas.—Teeter-Keagy Land Co. incorporated at Hagerstown, Ind., with \$50,000 capital stock; purchased 1600 acres of land and will develop for colonization.

Ark., Walnut Ridge.—Dowell Land Co. incorporated with \$50,000 capital stock; S. C. Dowell, president.

Fla., Fort Pierce.—Florida East Coast Realty Co., W. S. Hoskins, president, 945 Pennsylvania Ave., Washington, D. C., organized with \$300,000 capital stock (not \$30,000, as recently stated), will develop 35,000 acres of land; subdivide into 40-acre tracts; drain by ditching machines; bids will be invited.

Fla., Monticello.—American National Land Corporation of Chicago, Ill., purchased Bolton and Weelaunee plantations in Jefferson county, near Monticello, for \$100,000; organizing company with \$40,000 capital stock and will start pecan trees; awarded contract to Jefferson Nursery Co. of Monticello to plant trees and care for same for five years.

Ga., Americus.—T. C. Bailey purchased 100 acres of land and will plant about 2000 pecan trees.

Md., Pikesville.—Cityco Realty Co., J. J. Hurst, president, 1201 Calvert Bldg., has plans by Reding & Howard, Hoffman Bldg., 11 East Lexington St., Baltimore, for surveying and subdividing East Sudbrook Park; contract for grading streets awarded to B. J. McCullough & Co., 2042 West Fayette St., Baltimore, Md.; now receiving bids for construction of cement sidewalks and other improvements. (See "Machinery Wanted.")

Md., Middle River.—Cityco Realty Co., J. J. Hurst, president, 1201 Calvert Bldg., has engaged Reding & Howard, Hoffman Bldg., 11 East Lexington St., Baltimore, Md., for making surveys, etc., on 250 acres of land on Middle River; will receive bids in few days for construction of two miles of streets and roads. (See "Machinery Wanted.")

N. C., Southern Pines.—Southern Farms Co. incorporated with \$20,000 capital stock by H. E. Cover and others.

Okla., Sapulpa.—Soliss Realty Co. incorporated with \$45,000 capital stock by John Soliss of Sapulpa, Howard Soliss of Muskogee, Okla., and others.

S. C., Simpsonville.—Edgefield Farming Co. incorporated with \$30,000 capital stock by H. P. Dew and P. S. Dew.

Tenn., Chattanooga.—Clifton Hills Realty Improvement Co. (recently reported incorporated with \$100,000 capital stock) organized with R. B. Cooke, president; Herbert Bushnell, treasurer; J. H. Hogan, secretary; purchased 192 acres of land on Rossville Blvd. for \$100,000; will subdivide and develop residence section.

Tex., Genoa.—Genoa Orange & Fig Co. organized; president, L. H. Payne of Chicago, Ill.; first vice-president, R. H. Bushway of Alcoa, Tex.; second vice-president, Wm. J. Brewer of New York; secretary-treasurer, T. W. Oilphant of Philadelphia, Pa.; purchased 2407 acres of land for \$192,560 and will cultivate orange and fig orchard; 1000 acres of Magnolia fig trees and 1000 acres Satsuma oranges; awarded contract at \$204,000 to Alcoa (Tex.) Fruit & Nursery Co. for preparing, caring for and cultivating 2000 fig and orange trees.

Tex., San Antonio.—San Antonio Land & Building Co., recently reported incorporated with \$50,000 capital stock, will develop residence section; R. A. Richey, president; C. S. Potts and F. L. Jewett, Austin, Tex., vice-presidents; L. A. Casey, secretary-treasurer.

Tex., Tilden.—McMullen Townsite Co., J. P. Muckleroy, president, recently reported incorporated (under San Antonio, Tex.) with \$10,000 capital stock, will develop 640 acres of land near Tilden; install water-works and drill wells; Ehrenborg & Johnson, 518 Gibbs Bldg., San Antonio, Tex., engineers in charge.

Tex., Tilden.—Nueces Valley Garden & Realty Co., Oklahoma City, Okla., will develop 4000-acre tract of land near Tilden and subdivide into five-acre truck farms; George G. Ehrenborg of Ehrenborg & Johnson, 518 Gibbs Bldg., San Antonio, Tex., engineer in charge.

Va., Norfolk.—Norfolk Park Corporation, J. A. Klingensmith, Indiana, Pa., president, recently reported incorporated with \$30,000 capital stock, will purchase 1300 acres of land near Norfolk; will subdivide and develop into residence section.

W. Va., Fairmont.—Riverview Improvement Co. incorporated with \$20,000 capital stock by Glenn F. Barnes, Clarence D. Robinson, John Henshaw and others.

W. Va., Martinsburg.—Berkeley Land Co. incorporated with \$50,000 capital stock by Alexander Clohan, X. Poole, F. E. Wilson and others.

W. Va., Martinsburg.—Company organized by Charles W. Lord of Dover, Del.; G. A. Harrison of Berlin, Md., and J. William Stewart of Martinsburg; purchased Federal Hill Farm in Berkeley county, near Martinsburg, containing 250 acres, for \$25,652; will plant 10,000 fruit trees.

LUMBER MANUFACTURING

Ala., Birmingham.—Atlantic Lumber Co. changed name to Atlantic Lumber & Roofing Co. and increased capital stock from \$30,000 to \$53,000.

Ky., Pulaski County.—Geary Land & Development Co. incorporated with \$130,000 capital stock by John A. Geary, Chicago, Ill., and others. (See "Coal Mines and Coke Ovens.")

La., Concordia Parish.—Tensas River Lumber Co., S. A. Conn, general manager, Natchez, Miss., will, it is reported, construct sawmill on Black River at cost of \$25,000; contract for \$6000 worth of machinery awarded; Richard Wilds, Wildsville, La., has contract at \$75,000 for logging 2800 of 70,000 acres of timber land in Concordia, Catahoula and Tensas parishes, and expects to cut 2,000,000 feet of timber during fall.

La., Lake Charles.—Quixote Realty Co. incorporated with \$15,000 capital stock to deal in and develop timber lands; Charles F. Howell, president; Joseph Duhon, vice-president; I. D. Wall, Jr., secretary-treasurer.

La., Olla.—R. M. Steele, Winnsboro, La., will erect sawmill and develop several hundred acres of hardwood timber land.

Mo., Brookfield.—Bettelheim Lumber Co. incorporated with \$18,000 capital stock by Bernard F. and Arthur E. Bettelheim and others.

Mo., Huntsville.—Arkansas Land & Timber Co. incorporated with \$10,000 capital stock by Perry T. Vasse, C. F. Crist and O. A. Barnhard.

Okla., Hugo.—Dodd-Haller Lumber Co. incorporated with \$8000 capital stock by G. W. Dodd, S. W. Haller, J. C. Shelton, Q. B. and L. C. Shelton.

Tenn., Bristol.—Peter-McCain Lumber Co. will develop 300-acre tract land near Ruth-ton, Tenn.; cut 3,000,000 feet timber; mills already established; daily capacity 40,000 feet; W. G. McCain, president; George H. Peter, secretary-treasurer.

Tenn., Shooks.—Nichols Bros. will erect saw and grist mill.

Tenn., Tracy City.—W. F. Bradley Lumber Co., Zanesville, O., purchased timber land on Cumberland Mountain and will establish sawmill; machinery purchased; besides manufacturing lumber propose to produce wagon spokes, rims, etc., and tool handles.

Tenn., White Pine.—White Pine Mill Co. incorporated with \$10,000 capital stock by C. H. Byrd, B. G. Clark, H. S. Stewart, J. E. Holloway and F. C. Bartley.

Tex., Dallas.—Galloway-Daniel Lumber Co. incorporated with \$10,000 capital stock by W. F. Daniel, C. C. Galloway and W. V. Hardy.

Va., Bowling Green.—Walter Wilson, Walkerton, Va., purchased 1205½ acres of land for \$25,000, estimated to contain 5,000,000 or 6,000,000 feet of timber, which will be manufactured into lumber.

Va., Rosslyn.—Rosslyn Lumber Co. increased capital stock from \$50,000 to \$200,000.

METAL-WORKING PLANTS

Okla., Oklahoma City.—Shingles.—Burriss Metal Shingle Co. incorporated with \$25,000 capital stock by J. B. Ellison, W. A. Pepper, M. E. Ellison and E. M. Grandy.

MINING

Ala., Birmingham.—Iron.—Jefferson Brown Ore Co. incorporated with \$10,000 capital stock by B. F. Wilson, Jr., E. Greenhalgh and Geo. A. Gibson.

Mo., Kansas City.—Lead and Zinc.—Mineral King Mining Co. incorporated with \$40,000 capital stock by James T. Robinson, Clay C. Rogers and William Walter Brady.

Okla., Granite.—Menton Granite Co., American National Bank Bldg., Oklahoma City, Okla., reorganized, increased capital stock from \$25,000 to \$100,000 and changed name to Oklahoma Rose Granite Co.

Okla., Ravia.—Copper.—Klamicha Mining Co. will develop copper deposits; install several shafts.

Okla., Ravia.—Copper.—Ballard Company will develop copper deposits.

Okla., Salsaw.—Granite.—Company is being organized by E. D. Nims of Pioneer Telephone & Telegraph Co. of Oklahoma City, Okla., and others to develop granite and

stone quarries 10 miles north of Salsaw; W. W. Cochran, superintendent.

Tex., Velasco-Sulphur.—B. M. Baruch and Mr. Pemberton of New York secured options on land in Bryan Heights containing sulphur deposits; will develop.

Va., Richmond.—Gulf Coast Corporation incorporated with \$1,000,000 capital stock; B. A. Ruffin, president; J. T. Lewis, vice-president; W. R. Lecky, treasurer; L. H. Drew, secretary.

Va., Stuarts Draft.—Iron.—Shenandoah Ore Co. incorporated with \$5000 capital stock; president, J. J. Bockee of Stuarts Draft; vice-president, I. J. Keister of Avila, Va.; secretary-treasurer, J. E. Dougherty of Harrisonburg, Va.

MISCELLANEOUS CONSTRUCTION

Fla., Key West.—Government will construct quay wall at naval station; bids will be received until December 10; R. C. Hollyday, chief of bureau. (See "Machinery Wanted.")

Ga., Savannah.—Subway.—Special committee of City Council will receive bids until December 5 for construction of subway on Henry St. at Atlantic Coast Line Railroad crossing; Harry Willink, Director of Public Works. (See "Machinery Wanted.")

La., New Orleans.—Levee.—Michael Mitchell is lowest bidder at 14.7 cents per cubic yard for construction of Vic Ademia to Prosper Gagnet Levee on Mississippi River in Plaquemines parish; contents about 10,000 cubic yards.

Va., Richmond.—Bulkhead Wharf.—City receives proposals until December 2 for specifications and detail drawing for reinforced concrete bulkhead wharf; Charles E. Bolling, City Engineer. (See "Machinery Wanted.")

MISCELLANEOUS ENTERPRISES

Ark., Helena.—Rock Crushing.—Helena Rock Co. incorporated with \$24,000 capital stock by S. Straub and W. N. Straub.

Ark., Little Rock.—Printing.—Calvert-McBride Printing Co. incorporated with \$10,950 capital stock; C. C. Calvert, president; John R. McBride, vice-president; Geo. A. Lane, secretary-treasurer.

Fla., Jacksonville.—Laundry.—Eagle Laundry Co. incorporated with \$25,000 capital stock; James Kennedy, Jr., president; W. H. Dowling, Jr., vice-president; John C. Jones, secretary-treasurer.

Fla., Tampa.—Garage.—Charles Wright will erect two-story brick garage.

Ga., Macon.—Newspaper.—Macon Telegraph Co. will rebuild newspaper plant recently reported burned; will install six linotypes, press, etc.; loss \$100,000.

Ky., Lexington.—Printing.—Welsh & Murray Printing Co. incorporated with \$20,000 capital stock; takes over printery of James F. Hughes; will install portion of machinery now used by Welsh & Murray and some new equipment.

Ky., Lexington.—Transfer.—Merchants' Transfer Co. incorporated with \$25,000 capital stock by J. C. Tunis, Milton P. Sanchez, John M. Kelly and others.

Md., Baltimore.—Electrical Displays.—International Movable Electric Display Co. (recently reported incorporated), Chas. J. F. Steiner, president, is located at 403 Builders' Exchange Bldg., 15 East Fayette St. (not 101 North 8th St., as recently noted); capital stock \$50,000.

Md., Baltimore.—Bakers' Utensils, etc.—George C. Schimpf Company incorporated with \$10,000 capital stock by George C. Schimpf, 1967 Allicanna St.; Louis Rosenfeld, 1735 East Baltimore St., and others.

Md., Baltimore.—Plumbing.—Guth Company incorporated by Harry A. Warner, 345-51 Calvert Bldg.; C. Charles Friedel and Geo. A. Finch.

Md., Baltimore.—Decorating.—Economy Painting Co. incorporated by Aaron Neveck, 718 Alsquith St.; Louis Cohen and Edward Liberman.

Md., Baltimore.—Fertilizer.—Wiley Plant Food Co. incorporated with \$5000 capital stock by Joseph N. Wiley, 3244 East Baltimore St.; Geo. A. Finch and Harry A. Warner, both of 345-51 Calvert Bldg.

Md., Salisbury.—Marine Construction.—Salisbury Marine Construction Co. incorporated with \$25,000 capital stock by Otis S. Lloyd, Robert D. Grier and John S. Smith.

Miss., Meridian.—Printery.—Meridian Printing Co. incorporated with \$2500 capital stock by B. S. Bernard, W. Harvey Hurt, both of Meridian, and S. W. Harvey of Mobile, Ala.

Mo., Kansas City.—Cemetery.—Oak Crest Cemetery Co. incorporated with \$50,000 capital stock; president, William Cross of Sayre,

Pa.; vice-president, H. A. Allen; secretary-treasurer, R. O. Cross, both of Kansas City.

Mo., St. Louis.—Electric Construction.—International Electric Construction Co. incorporated with \$3000 capital stock by R. H. Robinson, A. S. Doxsee and L. A. Doxsee.

N. C., Henderson.—Garage.—Henderson Garage Co. incorporated with \$25,000 capital stock by C. H. Turner, Alexander Cooper and J. C. Skinner.

Okla., Tulsa.—Cleaning Plant.—E. R. Kemp awarded contract to Schallenberg Construction Co. of Tulsa for erection of building for cleaning plant for Parisian Cleaners and Dyers; one story; 50x100 feet; brick and stone, with rear building 25x30 feet; cost \$5000.

Okla., Vinita.—Construction.—Nelson Construction Co. incorporated with \$25,000 capital stock by C. C. Roberts of Vinita, H. H. Hellen of Wagoner, Okla., and others.

Okla., Vinita.—Construction.—Nelson Construction Co. incorporated with \$25,000 capital stock by C. C. Roberts of Vinita; August Nelson of Mound Valley, Kans.; Fred Nelson and S. H. Nelson of Persons, Kans., and H. H. Hellen of Wagoner, Okla.

S. C., Columbia.—Garage.—Gibbes Machinery Co. will expend \$10,000 to erect garage and office building recently noted; two stories and subcellar; 250 feet long; brick, concrete and steel; plans by J. B. Uguhart, Columbia.

Tenn., Memphis.—Engineering.—Morgan Engineering Co. incorporated with \$5000 capital stock by Arthur E. Morgan, S. B. Hutten, L. L. Hiddinger and others.

Tenn., Nashville.—French Dry Cleaning Co. will rebuild dry-cleaning plant reported burned; loss \$2300.

Tenn., Nashville.—Publishing.—Home Magazine Publishing Co. incorporated with \$10,000 capital stock by A. T. McDill, L. C. Cautwell, A. E. Booth, H. L. Rich and M. de Pussard.

Tex., Houston.—Automobiles.—Texas Automobile Co. incorporated with \$10,000 capital stock by R. R. Thomson, Sterling Myer and E. R. Richardson.

Tex., Leonard.—Supplies.—Farmers' Union Supply Co. incorporated with \$3750 capital stock by C. W. Moats, R. S. Ford, T. F. Macon and others.

Tex., San Antonio.—Decorating.—International Decorating Co. incorporated by F. G. Knudson, F. H. Lemly and Frank H. Booth.

Tex., San Antonio.—Amusement Park.—Joseph Krimmer has plans by Behies & Boelhaue of San Antonio for \$150,000 "white city" amusement park at Schuymey Park; will cover 10 acres; 557x800 feet; will construct two lakes 250x111 feet; bridge to span both; construct stadium, theater to seat 300, and menagerie; buildings and columns to have white-plaster effect on exterior with gold decorations; buildings to be topped with tile.

Va., Richmond.—Engineering.—McConnell-Browning Engineering Co. incorporated with \$25,000 capital stock; W. H. McConnell, president; M. J. Browning, secretary-treasurer; both of Richmond; H. R. McConnell, vice-president, Washington, D. C.

Va., Richmond.—Automobiles.—Southern Motor Car Co. incorporated with \$25,000 capital stock; L. M. Lee, president; R. M. Strader, vice-president; B. E. Eastwood, secretary-treasurer; C. W. Yeamans, general manager.

W. Va., Clarksburg.—Plumbing, etc.—Batten Roofing Supply Co. incorporated with \$10,000 capital stock by Joan A. Batten, Ellis Lyon, Emma Lyon and others.

MISCELLANEOUS FACTORIES

Ala., Atmore.—Naval Stores.—Atmore Naval Stores Co. incorporated with \$10,000 capital stock by H. H. Patterson, Harriet C. Patterson, A. C. Peacy and others.

Ala., Birmingham.—Aeroplanes.—National Airship Co. will be incorporated to manufacture patented aeroplane invented by Robert R. Zell.

Ala., Birmingham.—Soap.—Mona Manufacturing Co. changed name to Birmingham Soap Manufacturing Co. and increased capital stock from \$5000 to \$50,000.

Ala., Birmingham.—Heating Device.—Climax Heating Co., W. L. Bowman, president, 619 First National Bank Bldg., recently reported incorporated with \$15,000 capital stock, will manufacture patented device for heating stoves, ranges, etc.; will not at present erect building. (See "Machinery Wanted.")

Ala., Birmingham.—Bakery.—Martin Biscuit Co. incorporated with \$35,000 capital stock; E. L. Martin, president and general manager; R. D. Mills, secretary-treasurer; W. L. Klein, vice-president; will establish bakery.

Ala., Birmingham.—Talking Machines.—American Multiplex Co. incorporated with \$100,000 capital stock to establish plant to manufacture talking machines; install machinery to cost \$10,000.

Ark., Fort Smith.—Wallace Invalid Bed Co. of Chicago, Ill., is reported to establish factory to manufacture invalid beds.

Ala., Mobile.—Boats.—Marine Construction & Docking Co. incorporated with \$12,000 capital stock; Geo. W. Jones, president; Edward J. Gorman, general manager; Geo. C. Jones, secretary-treasurer.

D. C., Washington.—Gas.—Washington Gas Light Co., 411 17th St. N. W., will issue \$250,000 of bonds for plant improvement.

Fla., Jacksonville.—Gas Plant.—Jacksonville Gas Co. will erect plant; gas building two stories, steel and terra-cotta tile, 48x52 feet, cost \$19,000; one-story brick engine-room, 36x40 feet, cost \$2500; steel engine-house, one story, 30x32 feet, cost \$3000; fireproof construction.

Fla., Pensacola.—Cigars.—Domingo Vasquez of Tampa, Fla., will establish cigar factory; capitalization, \$20,000.

Ga., Augusta.—Cigars.—Dorr Cigar Factory incorporated with \$10,000 capital stock and privilege of increasing to \$100,000; has secured New Cummins Bldg. for factory; W. T. Edwards is manager. (Recently noted.)

Ga., Macon.—Plows.—C. W. Hicks, 125 Tenney Ave., proposes organizing company to establish plant at either Macon or Atlanta, Ga., to manufacture patented plow.

Ky., Louisville.—Tobacco.—G. O. Tuck & Co., Danville, Va., will re-establish tobacco plant recently burned; construction begun.

La., Abbeville.—Sugar.—Abbeville Sugar Co. organized with \$150,000 capital stock; O. J. Chauvin, president; C. J. Edwards, vice-president; L. J. Broussard, secretary; will establish sugar factory with daily capacity of 600 tons of sugar. (Previously noted.)

La., New Orleans.—Cattle Guards.—Parker Cattle Guard Co., 702 Whitney Bank Bldg., New Orleans, and Birmingham, Ala., will establish plant to manufacture cattle guards invented by W. E. Parker of New Orleans.

Md., Allegany County.—Coal Briquettes.—Phoenix & Georges Creek Mining Co., Stephen Girard Bldg., Philadelphia, Pa., will build coal briquetting plant; understood machinery has been manufactured in Belgium and will arrive in November for immediate installation.

Md., Baltimore.—Geo. Gunther, Jr., Brewing Co., 1211 South 3d St., is having plans prepared by Otto G. Simonson, American Bldg., Baltimore, for alterations and erection of two-story addition to brewery; architect receiving bids.

Mo., Kansas City.—Gates.—Bruner Gate Manufacturing Co. incorporated with \$100,000 capital stock by T. T. Bathurst, J. F. Swares, C. M. Talley and others.

Mo., Kansas City.—Automobile.—Stafford Motor Car Co. increased capital stock from \$100,000 to \$400,000 and will double output, increasing to 150 cars annually.

Mo., Morehouse.—Bimel-Ashcroft Manufacturing Co. incorporated with \$25,000 capital stock by Fred Bimel, Joseph Ashcroft, P. J. Kimener and others.

Mo., St. Louis.—Skirts.—Carafoll-Silverman Skirt Co. incorporated with \$30,000 capital stock by Alexander Carafoll, Jos. E. Silverman and Emil Mayer.

Mo., St. Louis.—Motor Cars.—Moon Motor Car Co. increased capital stock from \$175,000 to \$300,000.

Mo., St. Louis.—Batteries.—Missouri Battery & Lighting Co. incorporated with \$300,000 capital stock by Geo. F. McClain, Max Morris, H. W. Darby and others.

Mo., St. Louis.—Ladies' Hat Forms.—Levis-Zukoski Mercantile Co. leased space at 1005-07 Washington Ave. and will manufacture ladies' hat forms.

Mo., St. Louis.—Skirts.—Carafoll-Silverman Skirt Co. incorporated with \$30,000 capital stock by Alexander Carafoll, Jos. E. Silverman and Emil Mayer.

Mo., St. Louis.—Gillwater Manufacturing Co. increased capital stock from \$10,000 to \$20,000.

Okla., Oklahoma City.—Pianos.—Weber Piano Co. will establish piano factory; erect building 50x200 feet; two stories; fireproof construction.

Okla., Oklahoma City.—Oil Refinery.—Bartlesville Oil Refining Co. is name of company (recently reported incorporated with \$300,000 capital stock) to establish oil refinery; will erect 137,000 buildings; ordinary construction; install boilers and steel tankage; A. J. Stewart, president; B. M. Mellon, vice-president; W. A. Coutant, secretary, treasurer and manager. (See "Machinery Wanted.")

Okla., Rovia.—Lime.—James Wiggins of Oklahoma City, Okla., will establish lime-kin.

Okla., Tulsa.—Automobiles.—Tulsa Automobile & Manufacturing Co. awarded contract for erection of proposed \$10,000 factory building.

Okla., Tulsa.—Mail Exchange.—Hupp Automatic Mail Exchange Co. of Kansas City, Mo., in which Warren F. Snyder is interested, will probably establish plant for manufacturing automatic mail exchanges for delivering mail to and receiving mail from trains; Tulsa address temporarily, care of M. H. O'Connor.

Tenn., Jellico.—Ice-cream.—Jellico Cream Co., recently reported organized, will operate ice-cream factory; building erected; machinery mainly purchased; daily capacity, 100 gallons ice-cream; D. A. Harkness is manager. (See "Machinery Wanted.")

Tex., Amarillo.—Boyle Manufacturing Co. incorporated with \$10,000 capital stock by Dad Boyle, J. S. Chestnut and J. M. Walsh.

Tex., Aransas Pass.—Tents and Awnings.—W. A. Laufman of Lawton, Okla., will establish plant to manufacture tents and awnings.

Tex., Cisco.—Creamery.—Company organized to establish creamery; W. C. Bedford, chairman; W. W. Moore, secretary; J. W. Hartman, secretary of executive committee, Jesse Barker, master mechanic of Williams Construction Co., will be engineer in charge of construction.

Tex., Houston.—Brewery.—Fritz Kalb is interested in establishment of brewery.

Tex., Houston.—Cigars.—Andrae Rey & Co. of Tampa, Fla., will establish cigar factory.

Tex., Houston.—Coffee.—International Coffee Co. has plans by and awarded contract to H. L. Stevens & Co., Houston, for coffee plant; three stories; steel and concrete; fireproof construction; cost \$20,000; cost of machinery, \$15,000. (Recently incompletely mentioned.)

Va., Alexandria.—Molds.—Morrill Molds Corporation incorporated with \$100,000 capital stock; Milton D. Morrill, president Corcoran Bldg., Washington, D. C.; John Leadbeater, secretary-treasurer, of Alexandria.

Va., Lynchburg.—Tobacco.—Hancock Bros. & Co. incorporated with \$150,000 capital stock; R. J. Hancock, president; Richard Hancock, vice-president and secretary.

Va., Suffolk.—Peanuts.—John King Peanut Co. incorporated with \$50,000 capital stock; John King, president; E. A. Morrison, secretary.

W. Va., Chapmansville.—Carbon Black.—Castle Brook Carbon Black Co., Williamsport, Pa., will establish plant with daily capacity 3000 pounds gas carbon black; 12 buildings; remove part of Smithburg (W. Va.) plant to Chapmansville.

W. Va., Berkeley Springs.—Creamery.—Berkeley Springs Creamery & Evaporating Co., recently reported incorporated with \$10,000 capital stock, will operate creamery; machinery mainly purchased; T. W. Norris, president; C. Scott, vice-president; W. F. Leary, secretary; A. Mendelhall, treasurer. (See "Machinery Wanted.")

W. Va., Buchanan.—Clothing.—London Woolen Mills Co. incorporated with \$5000 capital stock by J. H. Kaplan, Samuel Unger and others.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, SHEDS, ETC.

Okla., Oklahoma City.—Oklahoma Railway Co., Anton H. Cissen, president, has arranged for proposed \$300,000 loan to be expended on construction of additional terminal buildings, train sheds, trainmen's quarters, waiting-rooms and other improvements at Grand and Harvey Aves.; plans include three fireproof buildings to be arcaded and connected with present building by arcade; trainmen's quarters will contain gymnasium, bathrooms, sleeping apartments and restaurant. (Recently mentioned.)

W. Va., Fairmont.—Fairmont & Clarksburg Traction Co., James O. Watson, general manager, will, it is reported, construct addition to carhouse and repair shops.

ROAD AND STREET WORK

Ala., Birmingham.—City awarded contract to Dunn & Lallande Bros. at \$12,573 and to E. W. Jordan Contracting Co. at \$3,349.50 (both of Birmingham) for street paving. (Recently mentioned.)

Ala., Montgomery.—Allen R. Gilchrist, City Engineer, has been authorized to advertise for bids for paving Clithral St. between Hull and Decatur Sts., distance of two blocks; City Council will open bids November 21.

Ark., Helena.—Joseph Solomon and associates will pave Elm St. from Cherry St. to Yazoo, & Mississippi Valley Railroad tracks.

Fla., St. Augustine.—City contemplates paving Bay St. with asphalt; cost probably \$1000. Address The Mayor.

Ga., Macon.—City contemplates paving First, Cherry and Mulberry Sts. and Georgia and Hardeman Aves.; to be provided for out of \$100,000 bond issue. Address The Mayor. (Previously mentioned.)

La., Crowley.—City awarded contract to De Jersey & Barnard, Jennings, La., to construct 33,000 square feet concrete street crossings; contract price, 28 cents per square foot for crossings and 14 cents per square foot for approaches from side streets to crossings; R. J. Boudreux, City Clerk. (Recently mentioned.)

Md., Annapolis.—Anne Arundel county will grade and macadamize road from Shipley Station 1½ miles south, known as Annapolis Rd.; bids received until November 15; S. O. Tighman, clerk County Commissioners. (See "Machinery Wanted.")

Md., Pikesville.—Cityco Realty Co., J. J. Hurst, president, 1201 Calvert Bldg., Baltimore, Md., will receive bids through Reding & Howard, 11 East Lexington St., Baltimore, Md., for construction of cement sidewalks in connection with development of East Sudbrook Park.

Mo., Joplin.—City awarded contract to J. B. Hodgdon & Co. to pave Joplin St. from 1st to 3d St.

Md., Middle River.—Cityco Realty Co., J. J. Hurst, president, 1201 Calvert Bldg., will construct about two miles of roads and streets in connection with development of residential section on Middle River. (See "Land Developments.")

N. C., Asheville.—E. T. Belote, 182 Flint St., Asheville, recently reported as lowest bidder, was awarded contract at \$1.08 per square yard for construction of 5000 square yards of concrete sidewalk recently noted. J. B. Bostle is superintendent of street work.

Okla., Oklahoma City.—City will construct sidewalk aprons; bids will be received until November 14; Bob Parman, City Clerk. (See "Machinery Wanted.")

Okla., Pawhuska.—City will pave 20 blocks in business district. Address The Mayor.

Okla., Tulsa.—City Commission adopted resolutions providing for paving of about 90 blocks of street with asphalt at estimated cost of \$350,000; bids opened November 22; streets will include 2d St., alley between Frankfort and Greenwood Sts. to east city limits, estimated cost \$85,668.64; 12th St., Main to Boston St., and all of Oak Grove Addition, \$44,321.05; West 5th St., Elwood to Nogales St., \$24,591.06; Cheyenne, 14th to 15th St., and 14th St., Carson to Boulder St., \$19,563; T. C. Hughes, City Engineer. (Recently mentioned.)

Tex., Abilene.—City awarded contract to Texas Bitulithic Co., Dallas, Tex., to pave Chestnut St.; reported that R. H. Locke of Abilene has contract for curb work.

Tex., Amarillo.—City will receive new bids until November 21 for about 80,000 square yards of paving; various kinds of material will be considered; \$75,000 bond issue available; E. L. Dalton, engineer, Dallas, Tex.; Samuel J. Brown, City Secretary. (Recently mentioned. See "Machinery Wanted.")

Tex., Dallas.—City will pave Main St. from Ervay St. to Houston & Texas Central Railroad; Holmes St. from Grand to Pennsylvania Ave.; Grand Ave. from Ervay to Holmes St.; bids received until November 14; J. B. Winslett, City Secretary. (Recently mentioned. See "Machinery Wanted.")

Tex., Fort Worth.—City will construct concrete curbing and sidewalk on Cactus and May Sts., Standpipe Park; bids invited. Address Superintendent and Engineer, Park Department, City Hall. (See "Machinery Wanted.")

Tex., Groesbeck.—City voted issuance of bonds for sidewalk paving. Address The Mayor.

Tex., Groesbeck.—City voted to construct sidewalks. Address The Mayor.

Tex., Munday.—City voted \$5000 bond issue for street improvements. Address The Mayor.

W. Va., Williamson.—Lee District, Mingo county, voted November 8 on issuance of \$90,000 of bonds for road construction. Address County Commissioners.

SEWER CONSTRUCTION

Ala., Tuscaloosa.—City awarded contract to Tuscaloosa Concrete & Supply Co. at \$7,779.59 to construct 13,755 linear feet eight-inch sanitary sewers, with 27 manholes and 8 flush tanks; may increase quantities to

27,105 feet of pipes, 69 manholes and 26 flush tanks; also awarded contract to McCartin Construction Co., Birmingham, Ala., at \$4,042.94 to construct following storm-water sewers: 352 feet of 20-inch pipe, 412½ feet of 24-inch, 357½ feet of 30-inch and 771 feet of 36-inch, including 5 manholes and 12 catch basins; W. B. Nicol, City Engineer.

Ga., Eastman.—City awarded contract to F. M. Benner & Co., Marion, Ind., at \$17,022 to construct 8½ miles of sanitary sewers; contract does not include construction of the two plants for purifying sewerage. Arthur Pew, Atlanta, Ga., is consulting and supervising engineer. (Recently mentioned.)

Ky., Louisville.—City will construct concrete sewer seven feet in diameter in Preston St., between Water and Fulton Sts.; estimated cost \$25,000; Board of Public Works invites bids until November 15.

La., Hammond.—City is considering issuance of bonds for construction of sewerage system. Address The Mayor.

Md., Arlington.—Patrick Flanagan of P. Flanagan & Sons, 120 East Lexington St., Baltimore, and Charles T. Cockey, Jr., president Commercial Bank of Maryland, Belvidere and Main Aves., Arlington, are interested in construction of sewer system for Arlington, Wilton Heights and Denmore Park; estimated cost, \$900,000.

Md., Baltimore.—Whiting & Middleton, 7 South Gay St., Baltimore, are lowest bidders on construction of sewers in District No. 31-A, sanitary contract No. 57; Calvin W. Hendrick, chief engineer Sewerage Commission, 904 American Bldg. (Recently mentioned.)

Md., Baltimore.—Board of Awards will open bids November 16 for constructing McMechen-street interceptor, sanitary contract No. 58; Peter Leary, Jr., chairman Sewerage Commission, 904 American Bldg.; Calvin W. Hendrick is chief engineer. (See "Machinery Wanted.")

Mo., Springfield.—City will vote November 21 on issuance of \$100,000 of bonds for extension of sewer system and \$100,000 for septic tanks at sewer outlets. Address The Mayor.

Okla., Cherokee.—City will let contract in about 60 days for construction of four miles of sewerage system, including laterals; Burns & McDonnell, Kansas City, Mo., engineers in charge. (Recently noted.)

S. C., Timmonsville.—City will construct sewerage system (bond issue previously noted); to include about 6000 feet lateral drains, consisting of brick and concrete and terra-cotta pipe 12 to 36 inches in diameter; J. W. Johnston, Florence, S. C., engineer in charge. (See "Machinery Wanted.")

Tex., Bryan.—City will construct sewer system; to include two miles of 8, 10 and 12-inch pipe, sewer purification plant, etc.; vitrified sewer pipe will be used; work under supervision of A. B. Carson, City Engineer; construction begins about November 15; cost \$12,500.

Tex., Dallas.—City Commissioners ordered bids invited for construction of storm sewer in Holmes St., between Bell and Forest Aves.; estimated cost \$3822.

Tex., Dallas.—City will construct vitrified pipe and concrete pipe storm sewers on Swiss Ave. between Peak St. and Pacific Ave.; bids received until November 11; J. B. Winslett, City Secretary. (See "Machinery Wanted.")

Va., Norfolk.—Board of Control will receive bids until November 19 for design, furnishing and installing three electrically-driven centrifugal pumps at Colley-avenue sewer pumping station; W. T. Brooke, City Engineer. (Recently incorrectly noted under "Water-works." See "Machinery Wanted.")

Va., Richmond.—City receives bids until November 16 for construction of certain sewers in different locations of city, approximately 13,000 feet long, varying in diameter from 2½ to 7½ feet, and number of smaller sewers; Charles E. Bolling, City Engineer. (See "Machinery Wanted.")

TELEPHONE SYSTEMS

Ky., Grapevine.—Perry Telephone Co. is reported contemplating erection of telephone line from Grapeville to Langnaugh via Chestnut Gap.

Ky., Whitesburg.—Whitesburg Telephone Co. is reported considering plans for construction of telephone line from Mandrake to Dry Forks and Line Fork, where it will connect with Line Fork Telephone Co.'s system; will also connect with line of Big Leatherwood Telephone Co.

Tenn., Erin.—Houston County Telephone Co. incorporated with \$5000 capital stock; A. J. Mitchum, president; L. Uffelman, vice-president; G. P. Atcheson, secretary-treasurer; purchased telephone lines, including over 200 telephones; will improve system, construct

additional lines and install additional exchanges.

Tex., San Marcos.—San Marcos Telephone Co. has reorganized; will re-equip and extend system; replace present poles with new ones; flashlight exchange to accommodate 600 phones.

TEXTILE MILLS

N. C., High Point.—Silk Cloth.—Stehli & Co., 84 Greene St., New York, awarded contract for construction of addition; will equip for silk weaving; present mill throws silk.

N. C., Southmont, P. O. at Linwood.—Silk. George Singleton, Dover, N. J., will erect two silk mills; report states he has arranged for machinery.

S. C., Columbia.—Press Cloth.—F. T. Parker, president National Hygienic Manufacturing Co., Builders' Exchange, Philadelphia, Pa., has about perfected arrangements for press-cloth mill previously mentioned; capital stock \$150,000; location in South and details of plant not determined; probably be announced by January.

S. C., Greenville.—India Lawns and Linons. J. I. Westervelt of Greenville; Woonsocket Machine & Press Co. of Woonsocket, R. I.; Potter & Johnston Machine Co., Fales & Jenks Machine Co. and Easton & Burnham Machine Co. of Pawtucket, R. I.; T. C. Entwistle Company of Lowell, Mass., and others will organize corporation with \$900,000 capital stock to build mill for manufacturing India lawns and linons from combed yarns; erect brick building two stories high, with steel beams and saw-tooth weaverroom; install 50,000 spindles, 1200 looms, etc. Mr. Westervelt will be manager.

S. C., Spartanburg.—Cotton Yarns.—Cohanet Cotton Mills organized with \$100,000 capital stock, succeeding Fingerville Manufacturing Co.; president, John J. Mitchell, Jr., Boston, Mass.; treasurer, Craig S. Mitchell, Philadelphia, Pa.; general manager, B. M. Aull, Pendleton, S. C.; equipment, 9000 ring spindles, etc.

WATER-WORKS

Miss., Benton.—City has plans by C. R. Berry, Benton, for drilling artesian well recently noted; 1,000,000 gallons capacity; William Young, Jackson, Miss., engineer in charge.

Miss., Tupelo.—Tupelo Municipal Plant, W. H. St. John, superintendent, will drill well 1000 to 1500 feet; will award contract. (See "Machinery Wanted.")

Okla., Chelsea.—City is proceeding with construction of proposed water-works system; O'Neil Engineering Co., Dallas, Tex., engineer in charge.

Okla., Cherokee.—City will make extension to water-works and electric-light plant; A. J. Titus, Mayor.

Okla., Collinsville.—City will construct water-works; receives bids until November 17 for purchase of material required; O'Neil Engineering Co., 1218 First State Bank Bldg., Oklahoma City, Okla., is in charge; John Middleton, president of Town Board. (See "Machinery Wanted.")

Okla., Foraker.—City awarded contract to C. A. Rees to construct water-works.

S. C., Charleston.—City council is considering construction of water-works; adopted resolution to employ water engineer to make estimate of cost and investigate feasibility of project; J. H. Dingle, City Engineer.

S. C., Darlington.—Darlington Water & Electric Co. will construct water-works; 3,000,000 gallons capacity; will erect brick and concrete pump-house and pit; also 500,000-gallon brick reservoir; install two steam and two electric pumps; W. W. Crocherson, engineer in charge. (Recently noted.)

S. C., Timmonsville.—City will receive bids until December 7 for furnishing and constructing waterworks (bond issue previously noted); will require brick reservoir, pumping station, deep well, steel tank and about five miles of four, six and eight-inch pipe; cost \$40,000; J. N. Johnston, engineer, Florence, S. C. (See "Machinery Wanted.")

Tex., Bryan.—City contemplates acquiring distributing system of present water company, or may decide to construct system; also proposes to construct sewer system; \$45,000 available. Address The Mayor.

Tex., Dallas.—City awarded contract to Hughes-O'Rourke Construction Co. of Dallas at \$30,050 to construct pumping station at White Rock reservoir; foundation of all walls and of engine-room will rest upon solid rock; basement 50x60 feet, 13 feet deep; will be provided for two pumping engines; total dimensions of building, 50x134 feet; roof 36 feet above basement; exterior of face brick; roof supported upon steel trusses; traveling crane will be installed for handling machin-

ery; contract has been awarded for one pumping engine to have capacity of 20,000,000 gallons; concrete foundations completed by contractor, Fred A. Jones Company of Dallas; J. M. Preston, City Engineer. (Recently mentioned.)

Tex., Denison.—City will receive bids until November 23 for furnishing pumping machinery to be installed at proposed pumping station at Shawnee reservoir; Y. D. Yocom, City Secretary. (See "Machinery Wanted.")

Tex., Munday.—City voted issuance of \$10,000 water-works bonds. Address The Mayor.

Va., Norfolk.—Norfolk County Water Co. has issued bonds for \$1,000,000 to provide for improvements and extensions to water-works system as required in future.

Tex., Tilden.—McMullen Townsite Co. will install water-works in connection with development of 640-acre tract of land; Ehrenborg & Johnson, 518 Gibbs Bldg., San Antonio, Tex., engineers in charge.

Va., Highland Park, P. O. Richmond.—City awarded contract to I. J. Smith & Co. of Richmond at \$4885 for wells, trenches and pump-house in connection with construction of water-works to cost about \$45,000; Glamorgan Pipe & Foundry Co. of Lynchburg, Va., is lowest bidder at about \$25,000 for hydrants, pipe and valves; contract for engines, pumps and tanks, estimated to cost \$16,000, were not awarded.

WOODWORKING PLANTS

Ala., Birmingham.—Furniture.—Cooper-Preston Furniture Co. incorporated with \$25,000 capital stock; M. F. McCarty, president and treasurer; Robert A. Preston, vice-president and general manager; Robert Strickland, secretary.

Ala., Mobile.—Carriages.—McKenzie-Barrett Carriage Co. incorporated with \$5000 capital stock by T. C. McKenzie and Thomas C. Barrett.

Ark., Little Rock.—Baskets, etc.—Diamond Basket Co., Inc., 224 West 5th St., is name of company recently noted being reorganized by George Clemens; leased 70x100-foot building and will install veneering machinery, staplers, etc., to manufacture basket and box goods; cost of machinery \$10,000; N. Ottenheimer, president and treasurer; E. E. Goldman, secretary; F. S. Baumeister and George Clemens, vice-presidents. (See "Machinery Wanted.")

Miss., Greenville.—Staves.—Creston Hoop Co., Creston, O., will be reorganized and establish stave factory recently mentioned; erect two buildings; mill construction; cost \$3500; J. O. Stayton, Greenville, engineer in charge; cost of machinery \$15,000; daily capacity 40,000 staves and 60,000 hoops; main office address, Greenville. (See "Machinery Wanted.")

Mo., Carthage.—Doors, etc.—Carthage Sash & Door Co. incorporated with \$20,000 capital stock by James S. Ross, James W. Ross and Frank C. Ross.

Mo., Hannibal.—Wagons.—Hannibal Wagon Co. incorporated with \$55,000 capital stock by Alfred E. Lasnier, Colina Lasnier and N. L. Le Blond.

N. C., Southmont, P. O. at Linwood.—J. M. Windham will establish plant for manufacturing finished and unfinished products for Northern manufacturers.

N. C., Southmont, P. O. at Linwood.—Smith & Koonitz will establish plant for manufacturing products.

N. C., Southmont, P. O. at Linwood.—D. K. Cecil will establish woodworking plant.

S. C., Greenville.—Mantels, etc.—Greenville Mantel & Novelty Co. will be incorporated with \$25,000 capital stock by Albert Barnes of Greenville and H. J. Sturtevant of Charlotte, N. C., to manufacture hardwood mantels, showcases, hardwood finishings for interior construction, etc.; will erect 60x120-foot two-story building; ordinary construction; install planing-mill machinery to cost \$5000. (See "Machinery Wanted.")

Tenn., Greeneville.—Chairs.—Greenville Chair Co., J. C. Moore, manager, will operate chair factory; machinery purchased; daily capacity 600 chairs. (Recently noted.)

Tenn., Nashville.—Wagons.—Milburn Wagon Co., E. C. Boykin, manager, will repair damages to building recently noted burned.

Tenn., Tracy City.—W. F. Bradley Lumber Co., Zanesville, Ohio, will establish plant for manufacture of wagon spokes, rims, etc. (See "Lumber Manufacturing.")

Tenn., Newcomb.—Mantels, etc.—Newcomb Manufacturing Co. will build addition; construction begun.

BURNED

Ala., Gadsden.—Gadsden Pipe & Fittings Co.'s small plant; larger plant not damaged.

Ala., Huntsville.—Huntsville Hotel; Huntsville Bank & Trust Co.'s building; loss \$130,000.
 Ala., Ozark.—Andrews House; loss \$5000.
 Ark., Paragould.—Mrs. Chas. Grogan's residence; loss \$3500.
 Fla., Chipley.—Chipley Gin Co.'s cotton gin and sawmill; loss \$10,000.
 Fla., Key West.—Peninsula & Occidental Steamship Co.'s dock and warehouse; estimated loss, \$300,000.
 Ga., Cairo.—Farmers' Union warehouse.
 Ga., Rome.—B. L. Fitch's residence; loss \$10,000.
 Ga., Union Point.—L. D. Carlton's residence; loss \$3000.
 Ga., Macon.—Macon Telegraph Co.'s news-paper plant; loss \$100,000.
 Ga., Macon.—James H. Blount's residence; loss \$10,000.
 Ky., Cloverport.—Glascock & Co.'s store; loss \$6500.
 Ky., London.—First National Bank Bldg.; Catching Hotel; estimated loss, \$150,000.
 Ky., London.—Catching Block, owned by First National Bank and W. B. Catching; loss \$100,000.
 Ky., Millersburg.—Tobacco barns of John H. Stewart, Miller & Best and R. B. Hutchcraft; Louisville & Nashville Railroad's freight depot; W. H. Courtenay, Louisville, Ky., is chief engineer of railroad; total estimated loss, \$60,000.
 Ky., Paducah.—E. A. Stow & Co.'s store; loss \$15,000.
 Ky., Paducah.—E. A. Straw & Co.'s store; loss \$15,000.
 La., Pine.—Louis Crain & Son's sawmill, gin and grist mill; loss \$3000.
 La., Stables.—Gulf Lumber Co.'s planing mill and 2,500,000 feet of lumber; reported loss \$100,000; main office in Fullerton Bldg., St. Louis, Mo.
 Md., Baltimore.—Charles Lorenz's residence on Jonquil Ave. near Rogers Ave.; loss \$6000.
 Md., Rawlings.—Lloyd Lowndes' barn; estimated loss, \$15,000.
 Md., Sykesville.—R. A. Harding's residence.
 Miss., Hattiesburg.—Swift & Co.'s plant, main office, Chicago, Ill.; Hugh Graham's livery barn; total loss, \$30,000.
 Miss., Mathew.—Frank M. Rashdale's cotton gin; loss \$1000.
 Miss., McComb City.—J. J. White, Jr.'s residence; loss \$10,000.
 N. C., Charlotte.—J. E. Miller's residence; loss \$5000.
 N. C., Cool Spring, R. F. D. from Statesville.—Leroy Campbell's sawmill.
 N. C., Lowell.—Spencer Mountain Mills' store building; loss \$7500.
 N. C., Southern Pines.—Piney Woods Inn; loss \$30,000.
 Okla., Woodward.—George Werline's residence; loss \$3500.
 S. C., Columbia.—Commercial Hall on State Fair Grounds. Address The Superintendent.
 Tenn., Athens.—John Crow's warehouse; estimated loss, \$3000.
 Tenn., Brighton.—Cotton gin owned by B. B. Lowese and Crescent Oil Co. of Memphis, Tenn.; loss \$4000.
 Tenn., Hohenwald.—Mrs. Nettie Stephens' residence; Sam Hinson's residence.
 Tenn., Memphis.—M. E. Carter's building at 52 S. Front St.; loss \$3000.
 Tenn., McMinnville.—Walling Lumber & Manufacturing Co.'s office building.
 Tenn., Waynesboro.—L. L. Lynnville's store, loss \$3000; J. A. Castile & Sons' store, loss \$3000; C. G. Bellew's store, loss \$3000; Mrs. Bellew's building, loss \$2500.
 Tenn., Nashville.—French Dry Cleaning Co.'s plant at 304 Eighth Ave.; loss \$2300.
 Tex., Blanchard.—Pitt Bros.' cotton gin; loss \$1500.
 Tex., Denton.—R. S. Anderson's residence; loss \$3000.
 Tex., Dew.—J. Johnson's cotton gin.
 Tex., Greenville.—Graham Bros. state their building was not burned, as was recently reported.
 Tex., Linden.—High-school building. Address The Mayor.
 Tex., Palestine.—W. J. Crawford's residence; loss \$6000.
 Tex., Powell.—J. O. Burke's cotton gin; loss \$6000.
 Tex., Prosper.—Lone Star Milling & Grain Co.'s plant; loss \$75,000.
 Tex., San Angelo.—Paul Garrett's flour mill; loss \$30,000.
 Tex., Terrell.—Texas Midland Railroad's bridge; estimated loss \$15,000; L. W. Wells, chief engineer.

Tex., Victoria.—Methodist Church; estimated loss, \$10,000. Address The Pastor, Methodist Church.
 Va., Chase City.—Thine Institute's Vincent hall; loss \$5000.
 Va., Culpeper.—Lewis Wood's residence.
 Va., Culpeper.—John A. Palm's residence; loss \$5000.
 Va., Culpeper.—T. B. Jones' two buildings and barn.

W. Va., Augusta.—Augusta Milling Co.'s feed and flour mill, owned by S. Bucklew.
 W. Va., Eglen.—Fike Bros.' flour, feed and saw mills; loss \$10,000.
 W. Va., Martinsburg.—Cushwa & Buxton's two buildings; loss \$6000.
 Va., Petersburg.—J. R. Jones' stable; estimated loss, \$25,000.
 W. Va., Martinsburg.—H. L. Doll's residence.

aisles 22 feet wide projecting 28 feet; usual rights reserved.

La., Eunice.—Catholic congregation will erect edifice to cost \$15,000. Address The Pastor, Catholic Church.

La., New Orleans.—Congregation Agudath Achim Anshel Sfard, Abraham Gutman, president, contemplates erecting synagogue.

Md., Arlington.—Roman Catholic congregation will build church. Address Rev. Fr. T. B. Kenny, 528 East 22d St., Baltimore, Md.

Md., Hagerstown.—Congregation of Sons of Jacob (Judah Gerber, Harry Schindler and others) will erect synagogue.

Mo., Fulton.—Christian Church will erect edifice; 80x120 feet; main auditorium, 52x65 feet, with seating capacity of 550; seating capacity, including balcony, 770, and total seating capacity, including balcony and Sunday-school room, 1200; estimated cost, \$45,000. Address The Pastor, Christian Church.

Okla., Pauls Valley.—First Baptist congregation will erect \$10,000 edifice. Address The Pastor, First Baptist Church.

S. C., Greenville.—Presbyterian Church contemplates erecting edifice to cost \$3000 to \$3000 at Monaghan Mills; A. G. Gower, chairman committee.

S. C., Sumter.—First Methodist congregation will erect brick and stone edifice to cost about \$10,000. Address The Pastor, First Methodist Church.

Va., Norfolk.—Baker & Brinkley of Norfolk are lowest bidders at \$71,783 for erection of edifice for Ghent Presbyterian Church; Ferguson, Catlow & Taylor, Norfolk, prepared plans. (Recently mentioned.)

CITY AND COUNTY

Ala., Birmingham.—Stockade and Fire Station.—City has plans by Harry Wheelock for proposed brick jail; will also erect fire station at D and 18th Sts., on present jail site; C. Exum, Mayor.

Ala., Ensley.—City Hall.—City will soon receive bids for improvement to city building. Address The Mayor.

D. C., Washington.—Library.—City has plans by Snowden Ashford, 1719 Riggs Pl. N. W., Washington, for proposed Carnegie Library at Takoma Park; cost \$35,000.

Ga., Augusta.—Stockade and City Stables.—City will erect stockade and stables; Thomas Barrett, Jr., Mayor.

Md., Baltimore.—Public Bath.—City is having revised plans prepared by Archer & Allen, Central Savings Bank Bldg., Charles & Lexington Sts., Baltimore, for public bath and comfort station at Harford and Greenmount Aves. and Monument St.; brick; one and a half stories; will receive new bids.

Okla., Weatherford.—City Hall.—City will erect city hall; 50x90 feet; fireproof construction; cost \$7500; J. H. Anderson, Mayor.

Va., Roanoke.—Fire Station.—City is having plans prepared by H. M. Miller, 5 South-west Virginia Trust Bldg., Roanoke, for three fire stations; brick; steam heat; slate roof; cost \$6000 each.

COURTHOUSES

Ga., Atlanta.—Fulton County Commissioners, S. B. Turman, chairman, contemplate erection of \$300,000 courthouse. (Previously noted.)

La., Lake Charles.—Calcasieu Parish Police Jury is having plans prepared by Favrot & Livaudais, New Orleans, for courthouse; cost \$155,000. (Previously noted.)

S. C., Georgetown.—Georgetown county contemplates voting on \$85,000 bond issue to erect courthouse. Address County Commissioners.

DWELLINGS

Ala., Birmingham.—R. T. Pittman will erect two-story brick veneered residence; cost \$4000.

Ala., Birmingham.—J. G. Doster will erect two-story frame dwelling; cost \$3000.

Ala., Birmingham.—Mrs. E. M. Shelton will erect two-story frame dwelling; cost \$2600.

D. C., Washington.—Mrs. Lula Davis awarded contract to James R. Degges, 550 Barry Pl. N. W., Washington, for erection of two two-story brick dwellings at 1367 and 1369 Morris Rd. S. E.; architect, N. T. Haller Company, Corcoran Bldg., Washington.

D. C., Washington.—Wm. A. Hill and Franklin T. Sanner of 1800 Adams Mill Rd. N. W., will erect three dwellings on Connecticut Ave.; two of white brick and stone; the other colonial style; 14 rooms and five baths; frontage 38 feet each; cost \$100,000; also erect dwelling on New Hampshire Ave. between R and S Sts.; stone construction; cost \$45,000.

D. C., Washington.—H. R. Howenstein, 1314 F St. N. W., will erect three two-story brick dwellings from 427 to 431 11th St. N. E.; cost \$7500; plans and construction by owner.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

Ark., Texarkana.—Southern Life Insurance Co., I. Schwarz, president, will not erect building. (Recent report was erroneous.)

D. C., Washington.—W. H. Sholes, Columbian Bldg., will erect apartment-house at 1769 Lanier Pl. N. W.; four stories; brick and concrete; cost \$75,000; 54x115 feet; plans by Hilmer & Bell, 518 10th St. N. W.

Fla., St. Petersburg.—J. W. Vandeventer will erect apartment-house; 15 rooms; three stories; 30x45 feet; concrete; asbestos shingle roof; fireproof; steam heat.

Ga., Savannah.—Savannah Bank & Trust Co. will expend \$400,000 to erect bank and office building recently described; 15 stories; 60x82 feet; fireproof construction; direct steam heat; electric lighting; plunger or traction elevator; plans by Mowbray & Uffinger, 56 Liberty St., New York; bids opened November 10.

Mo., St. Louis.—C. A. Poole will erect four two-story apartment-houses; cost \$22,000.

Tenn., Nashville.—O. H. Wilson has plans by C. K. Colley, Nashville, for apartment-house; three stories and basement; 14 three to five-room apartments; brick walls faced with gun-metal-shade wire-cut brick; elevated roof; 93x92 feet; stair halls and bathroom floors of tile; other floors of hardwood; marble wainscoting in main stair halls; steam heat; electric lights; cost \$35,000.

Tex., Dallas.—H. B. Thompson and Sam Hogshead will erect brick apartment-house; cost \$15,000; plans by Thompson & Harrison.

Tex., Houston.—Lamb-McAshan Co., E. C. Lamb, president, Binz Bldg., will expend \$85,000 to erect apartment-house; 100x45 feet; eight stories and basement; fireproof construction; steam heat; electric lighting; plans and construction by Mr. Lamb. (Recently noted.)

ASSOCIATION AND FRATERNAL

Miss., Biloxi.—Ancient Free and Accepted Masons plan issuance of \$20,000 of bonds to erect temple; brick; 75x85 feet; probably three stories.

Okla., Oklahoma City.—Young Women's Christian Association will erect home for girls; cost \$30,000.

Tex., Orange.—Young Men's Christian Association plans erection of \$5000 association building.

BANK AND OFFICE

Ala., Birmingham.—Robert Jemison, Jr., and associates planning erection of 40x100-foot office building, possibly 10 stories high, to cost \$200,000; architect, W. C. Weston, Brown-Marx Bldg., Birmingham.

Ala., Juliana (not a postoffice).—Cullman Coal & Coke Co., Cullman, Ala., will award contract early in 1911 for erection of office building; 125x50 feet; fireproof reinforced concrete construction; steam heat; electric lighting; cost \$25,000.

Ark., Hazen.—Bank of Hazen, A. J. Screeton, president, will erect bank building; two stories; brick; site 50x100 feet.

Ark., Peach Orchard.—D. Fassett of Delaplane, Ark., will erect bank building; 16x32 feet; mill construction.

D. C., Washington.—Victor J. Evans of Victor J. Evans & Co., Victor Bldg., 9th St. and Grant Pl., purchased site with frontage of 104 feet on F St. N. W. for about \$250,000, on which to erect six-story office building to be leased to Government for Civil Service Commission; plans by Appleton P. Clarke, Jr., Union Trust Bldg., Washington.

D. C., Washington.—Robert B. Caverly, 1321 G St. N. W., contemplates erecting office building at 1331 and 1333 G St. N. W.

D. C., Washington.—Equitable Association, 1003 F St. N. W., contemplates, it is reported, erecting office building.

Fla., Jacksonville.—E. H. Tomlinson and J. G. Boyd of Jacksonville and J. J. Heard, Arcadia, Fla., are having plans prepared by

Eastern architects for office building, to be at least 10 stories and probably 15 stories high. (Recently mentioned.)

Fla., Tallahassee.—William C. Hodges is having plans prepared by Grossmann-Mahler Architectural & Construction Co., Garrell Bldg., Wilmington, N. C., for three-story office building; red pressed brick; Spanish tile roof; marble wainscoting; hot-water heat.

Ga., Atlanta.—Southern Railway, D. W. Lam, chief engineer, Washington, D. C., opens bids November 28 for erection of office building and inbound freight depot. (Recently mentioned. See "Railway Stations.")

Ga., Atlanta.—East Atlanta Bank, E. A. Minor, president, Flat Shoals and Glenwood Aves., will erect bank building to cost \$5500.

La., New Orleans.—Illinois Central Railroad Co., A. S. Baldwin, chief engineer, Chicago, Ill., will erect office and warehouse building; 75x550 feet; cost \$150,000. (See "Warehouses.")

Okla., Muskogee.—George Harris, St. Louis, Mo., contemplates erecting three-story brick office building; site has frontage of 50 feet.

Okla., Oklahoma City.—Max Hershowitz is having plans prepared by E. Coady of Oklahoma City for 21-story fireproof office building to adjoin his 12-story building; steel frame construction; 50x140 feet; lower floor for mercantile purposes and upper floors for offices; marble wainscoting; marine water system to supply both buildings; 11c steps; two elevators; will install light estimated cost, \$600,000.

S. C., Columbia.—Gibbes Machinery Co. has plans by J. B. Uguhart, Columbia, for office and garage building; cost \$10,000. (See "Miscellaneous Enterprises.")

Tex., Del Rio.—L. Trawalter will erect office and store building. (See "Stores.")

Tex., Houston.—Krupp & Tully are considering erection of six-story fireproof office and business building to cost \$150,000.

Tex., Post.—First National Bank will erect bank building; two stories; native cut stone; 60x60 feet; banking-rooms, 40x50 feet, on first floor; cost \$40,000.

Tex., San Benito.—First State Bank will probably award contract to L. Fleming (address, care of bank) for erection of bank building recently noted; 100x100 feet; fireproof construction; heating not decided; electric lighting; cost \$22,000; plans by Endress & Walsh, Austin, Tex.

Tex., Winnie.—Farmers and Merchants' State Bank, P. F. Dee, cashier, is having plans prepared for bank building.

CHURCHES

Ala., Montgomery.—First Presbyterian Church will erect Sunday-school addition; George W. Cramer of New York will probably be engaged as architect; Ernest W. Stay is superintendent of Sunday-school.

Fla., St. Petersburg.—Seventh Day Adventists will erect edifice. Address The Pastor, Seventh Day Adventists.

Ga., Atlanta.—North Ave. Presbyterian Church, Rev. Richard O. Flinn, pastor, contemplates enlargement of edifice.

Ga., Atlanta.—Ponce de Leon Ave. Baptist Church, A. B. Caldwell, superintendent of Sunday-school, has not selected architect to prepare plans for Sunday-school building recently noted; brick veneer; cost \$10,000; will ask for bids about November 25.

Ky., Franklin.—Methodist Episcopal congregation will erect \$20,000 edifice. Address The Pastor, Methodist Episcopal Church.

Ky., Somerset.—First Baptist Church has plans by R. H. Hunt, Chattanooga, Tenn., for proposed edifice; 66x109 feet; ordinary construction; low-pressure steam heat; cost \$25,000; day's labor; George L. Ellicott is superintendent of construction.

La., Lafayette.—Church of St. John Evangelist, Rev. W. J. Teurlings, rector, opens bids November 24 for removal of edifice 150 feet forward; structure is 100x50 feet, with side

Fla., Jacksonville.—Mary E. Eberhart will erect two additions to dwelling; cost \$2800.

Fla., Jacksonville.—H. F. McAden will erect two two-story dwellings; cost \$10,500.

Fla., Jacksonville.—S. G. Wilkinson will erect two-story frame dwelling; cost \$3000.

Fla., Jacksonville.—Seminole Building Co. will erect two-story frame dwelling; cost \$4000.

Fla., St. Augustine.—Geo. Edmiston will erect dwelling.

Ga., Atlanta.—D. S. Walraven will erect residence; cost \$3000.

Ga., Atlanta.—Benney & Wesley will erect two \$2000 residences.

Ga., Brunswick.—C. A. Taylor will erect residence.

Ga., Doerun.—W. P. McGraw will erect residence; construction begun.

Ga., Doerun.—E. L. Bacon will erect residence.

Ga., Doerun.—J. P. Myers will erect residence.

La., New Orleans.—W. H. Kincaid will erect double two-story residence; cost \$4000.

Md., Baltimore.—Isaac H. Cooper has plans by Henry J. Finley, 314 North Charles St., Baltimore, for 16 dwellings on Madison St. near Milton Ave.; two stories; 13x44 feet; tin roof; hot-air heat; cost \$20,000.

Md., Baltimore.—J. J. Ulrich, 1143 Hollins St., will expend \$5000 for improvements to store and dwelling at Hollins St. and Carrollton Ave.; R. B. Mason, 210 East Lexington St., Baltimore, is bidding.

Md., Baltimore.—Charles B. Irwin, 1649 Milligan St., will erect six two-story brick dwellings on Bethel St.; 12x48 feet; cost \$3000.

Md., Baltimore.—William F. Welsh, 250 West Preston St., has plans by John K. Stack, 12 East Lexington St., Baltimore, for 12 two-story brick dwellings on Lowman St.; 12x40 feet; hot-air heat; slag roofs; cost \$12,000.

Md., Baltimore.—Harry F. Waldner of Henderson, Linthicum & Co., 3 East Camden St., has no definite plans for Ten Hills residence recently noted; construction will not begin for some months.

Md., Roland Park.—Wm. E. Herndon is having plans prepared by Wyatt & Nolting, Keyser Bldg., Baltimore, Md., for residence at Midvale Rd. and Kittery La.; two and a half stories; ornamental frame, stucco, brick and stone; hardwood flooring; hot-water heat; electric lights; cost \$16,000.

Miss., Biloxi.—E. P. Oneal of Greenville, Miss., is having plans prepared by H. H. Roof of Biloxi for residence; mission style; cement stucco; red tile roof; natural cement walls.

Mo., St. Louis.—E. L. Foster will erect residence at Liberty Heights; brick; cost \$6000.

Mo., Kansas City.—J. W. Merrill will erect residence.

Tenn., Hill City.—Charles E. Morris, 701 Broad St., is reported as having plans prepared for dwelling; cost \$3000.

Tex., Ballinger.—W. S. Morehead will rebuild dwelling recently reported burned; six rooms; grates and stoves; electric lighting; cost \$1800; bids opened. (See "Machinery Wanted.")

Tex., Dallas.—C. O. Coser will erect \$3000 residence.

Tex., Dallas.—R. S. Green will erect \$3500 residence.

Tex., Dallas.—Leo Levi will not erect dwelling, as was recently stated.

Tex., Dallas.—T. W. Erwin, Jr., will erect residence; cost \$3500.

Tex., Dallas.—Pinkney & Chandler will erect residence; cost \$3250.

Tex., Dallas.—Mrs. W. T. Moore will erect residence; cost \$3500.

Tex., Dallas.—Mrs. E. J. Merrill is having plans prepared by Associated Architects, 227 Main St., Dallas, for dwelling; eight rooms and basement; gas stoves; gas and electric lighting; concrete basement; cement walks; cost \$3000.

Tex., Dallas.—T. W. and Lou Leedom will erect \$2000 residence.

Tex., Goliad.—T. W. Pettus will erect residence.

Tex., Goliad.—T. W. Pettus will erect residence.

Tex., Gorman.—John H. Sweet has plans by Associated Architects, 227 Main St., Dallas, Tex., for six-room dwelling; frame construction; cost \$2500.

Tex., Houston.—G. A. Kelly will erect \$15,000 residence.

Tex., Houston.—Mrs. Ida Zindler will erect 10-room residence; cost \$3500.

Tex., Houston.—S. M. Later will erect residence; cost \$3500.

Va., Butylo.—F. C. Blackman has plans by Haskell & Barnes, 301 North Charles St., Baltimore, Md., for dwelling; Milton C. Davis, 15 East Fayette St., Baltimore, Md., is bidding.

Va., Cherrydale.—Albert Hale, 1412 Massachusetts Ave. N. W., Washington, D. C., will erect bungalow; two stories; seven rooms; concrete foundation; stucco walls; shingle roof; hot-water heat; plans by Harding & Upman, 729 15th St. N. W., Washington, D. C.

Va., Lynchburg.—George D. Witt will erect dwelling in Rivermont.

Va., Norfolk.—Lee & Diehl prepared plans for brick and shingle residence; contractors estimating are B. L. Nichols, Lowenberg & Gardner, Cox & Jones, Jessie Johnson, William Main and Dear & Totty, all of Norfolk.

Va., Richmond.—John G. Scott will erect brick residence; cost \$5000.

Va., Roanoke.—R. S. Williams is having plans prepared by H. M. Miller, 5 Southwest Virginia Trust Bldg., Roanoke, for dwelling; brick mantels; hot-water heat; slate roof; cost \$6000.

Va., Roanoke.—S. B. Pace is having plans prepared by H. M. Miller, 5 Southwest Virginia Trust Bldg., Roanoke, for dwelling; stone and stucco; hot-water heat; brick mantels; cost \$12,000.

GOVERNMENT AND STATE

D. C., Washington.—Jail.—Government awarded contract to B. F. Smith Fireproof Construction Co., 817 14th St. N. W., Washington, for steel cells, etc., in United States District Jail, previously noted to be remodeled; contract price, \$30,000.

D. C., Washington.—Armory.—Army Commission has accepted plans (for which \$2500 was appropriated recently) for proposed armory for District National Guard; building to cost about \$1,600,000.

La., New Orleans.—Laundry.—Bids will be received for construction of building for laundry at Soldiers' Home of Louisiana; plans and specifications to be seen at office of superintendent at Soldiers' Home; sealed bids to be sent to office of President T. C. Will, City Hall Annex, not later than 12 M. November 14; Julian S. Levy, secretary.

Mo., Lexington.—Postoffice.—Treasury Department, office of supervising architect, James Knox Taylor, Washington, D. C. Sealed proposals will be received until 3 P. M. December 19, and then opened, for construction complete (including plumbing, gas-piping, heating apparatus and electric conduits and wiring) of United States postoffice in accordance with drawings and specifications, copies of which may be obtained from custodian of site at Lexington or at this office, at discretion of architect.

Tenn., Dover.—Stable.—Office of Depot Quartermaster, Jeffersonville, Ind. Proposals will be received until 10 A. M. December 3 for building stable, complete, at Fort Donelson National Cemetery, Dover, in accordance with specifications and drawings, which may be seen at above office or of superintendent of cemetery; information furnished upon application at above office. Address Jcs. T. Davidson, Major and Quartermaster, U. S. Depot Quartermaster.

Tex., Temple.—Postoffice.—Government awarded contract at about \$68,000 for construction of postoffice to Cecil L. Saunders, Chamber of Commerce Bldg., Cleveland, O.; materials will include common and pressed brick, sand, Portland cement, cement plaster, yellow-pine framing timber, mill work, cut stone and granite, plumbing and heating installation, electrical work, marble trim, terrazzo floors, sheet metal and painting; contractor's representative will be in Temple after November 20. (See "Machinery Wanted.")

HOTELS

Ala., Huntsville.—J. E. Penny is reported contemplating rebuilding Huntsville Hotel, reported burned.

Ark., Helena.—Mrs. C. Straub will erect four-story brick hotel.

Ark., Little Rock.—T. P. Murrey leased Hotel Gleason and will make improvements.

Fla., Daytona.—H. & H. C. F. Dohm will erect 110x165-foot hotel recently noted; 100 rooms; five or six stories; brick or stone; plans not complete; construction will begin January 1.

Miss., Owens.—Owens Wells Hotel Co. incorporated by W. P. Hammett of Owens; W. I. Pickens of Lexington, Miss.; W. G. Plummer of Jackson, Miss., and others.

Miss., Summit.—Goldbold Mineral Wells Hotel will rebuild hotel recently reported burned; brick and concrete; cost \$40,000 to \$50,000.

Mo., Excelsior Springs.—I. J. Ringolsky and J. H. White of Kansas City, Mo., are having plans prepared by Jackson & McIlvain, Dwight Bldg., Kansas City, for hotel to replace New Elms Hotel recently reported burned; concrete; fireproof; form of "U"; cost \$153,000.

Mo., Sedalia.—John H. Bothwell will erect \$150,000 hotel.

N. C., Henderson.—Henderson Hotel Co. incorporated with \$50,000 capital stock by C. F. Whitted of Norlina, N. C.; Lee Paschal of Wise, N. C., and others.

N. C., Weaverville.—Sanitarium.—Dr. F. T. Merriweather and associates are having plans prepared by R. S. Smith, Asheville, N. C., for sanitarium recently noted; 40 rooms; ordinary construction; brick; steam heat; electric lighting; electric elevator; cost \$25,000. (See "Machinery Wanted.")

N. C., Wilmington.—Atlantis Hotel Co. will erect 168x300-foot hotel; exterior finish, cement stucco; red tile roof; basement to contain lounging-rooms and office for bathing department; on each side will be dressing-rooms, each to contain separate shower baths; bowling alleys, gamerooms, etc.; first floor to have main lobby and lounging lobbies, solariums, dining-room, billiard-room, barber shops, promenade porches, etc.; top floor to have bedrooms, dancing pavilion, convention hall, palm gardens and concert-room; each floor to contain 61 rooms, with private baths and storage closets; refrigerator plant, electrical equipment, etc., in basement; one freight and three passenger elevators; two towers to contain water tanks for fire purposes; estimated cost, \$250,000; Milburn, Heister & Co., Home Life Bldg., Washington, D. C., recently noted as architects.

Okla., Muskogee.—A. W. Duncan will erect 10-story hotel; construction begun.

Tex., Dallas.—Hospital.—St. Paul's Sanitarium, in charge of Sisters of St. Vincent de Paul, contemplates erecting addition to cost about \$150,000.

Tex., El Paso.—Walter D. O'Brien of Clarke & O'Brien, San Francisco, Cal., has plans by Bliss & Faville, San Francisco, for proposed \$700,000 hotel; seven stories; basement and roof garden; main lobby 45x54 feet, with 26-foot ceiling, above which will be mezzanine floor; 210 bedrooms; two passenger and one service elevator; 134x109 feet.

Tex., La Porte.—Oscar O. Allen of Bay Shore Land Co. purchased Carrollton Hotel, containing 56 rooms; will erect addition and make other improvements.

Tex., Palestine.—H. H. Franks, managing director of The Gunther, San Antonio, Tex., and of The Bristol, Houston, Tex., proposes erection of hotel.

W. Va., Parkersburg.—W. Bateson will erect hotel; 30 rooms; cost about \$10,000.

MISCELLANEOUS

Ga., Atlanta.—Building.—Dr. W. J. Langford will erect \$3500 building in Grant Park at head of Lake Abana.

Ga., Atlanta.—W. P. Walthall will erect building to cost \$5000.

Ga., Cordele.—Stable.—W. P. Flemming and Frank E. Williams will erect stable.

Miss., Biloxi.—Clubhouse.—Mississippi Coast Country Club, J. A. Jones, president, will erect clubhouse to cost \$10,000.

Mo., Kansas City.—Clubhouse.—Kansas City Musicians' Club, German-American National Bank Bldg., is considering erection of clubhouse; 75x115 feet; brick and stone; contain recital hall, studios, offices, etc.; estimated cost, \$75,000; site about 75x115 feet.

N. C., Black Mountain.—Stable.—Brown Bros. contemplate erecting livery stable.

Tenn., Knoxville.—Orphanage.—Deaderick Ave. Baptist Church, Rev. C. B. Waller, pastor, will erect orphanage to cost about \$10,000.

Tenn., Memphis.—Clubhouse.—Memphis Athletic Club (O. B. Polk, P. P. Van Fleet and others) has plans by N. M. Woods, supervising architect, Memphis, for clubhouse; steel; eight stories; elevators; roof garden; boiler and engine rooms; third to seventh floor, inclusive, will contain about 150 living-rooms; eighth floor for roof garden, palm garden, cafe and kitchen; site has frontage of 64½ feet and depth of 145½ feet; building proper will cost \$200,000, exclusive of furnishings, which, it is estimated, will cost \$75,000.

Tenn., Memphis.—Home.—Memphis Foundlings' Home contemplates erecting building; Mrs. J. P. Oliver, president executive board.

RAILWAY STATIONS

Ala., Birmingham.—Tidewater Railroad, J. M. Dewberry secretary, will construct passenger station and freight terminals.

Ga., Atlanta.—Southern Railway, D. W. Lum, chief engineer, Washington, D. C., opens bids November 23 for erection of inbound freight depot and office building; six stories high between Mitchell and Nelson Sts. and three stories between Nelson and Peters Sts.; frontage 700 feet on Madison Ave. from Mitchell to Peters St.; first and second floors of both buildings, first on level of railroad tracks and second on level of Madison Ave., for delivery of inbound freight; cars unloaded into first floor and freight carried by elevator to second floor, out of which it will be delivered to wagons on Madison Ave. level; two floors for freight delivery will have floor space of about 70,000 square feet; third floor and building between Nelson and Peters Sts. and four upper floors of six-story building between Mitchell and Nelson Sts. for offices; three-story structure will be 464 feet long and 50 feet wide, constructed entirely of reinforced concrete; six-story building will be 232 feet long and 50 feet wide, steel skeleton, concrete floors and pressed-brick finish; construction to provide for additional stories in future.

Ky., Paris.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., will erect freight depot; brick and stone; terra-cotta trimmings; cost \$30,000.

S. C., Rock Hill.—Southern Railway, D. W. Lum, chief engineer, Washington, D. C., will, it is reported, erect depot to cost \$50,000.

Tex., Lubbock.—Gulf, Colorado & Santa Fe Railway, F. Merritt, chief engineer, Galveston, Tex., will erect passenger depot to cost \$40,000; construction begun.

SCHOOLS

Ala., Jacksonville.—Jacksonville Normal College, C. W. Daughte, president, plans erection of college building.

D. C., Washington.—Board of Education, Franklin High School, 13th and K Sts. N. W., Washington, plans erection of central high-school building to replace present structure.

D. C., Washington.—Georgetown University will erect two-story building 50x75 feet; first floor for carpenter, plumber and blacksmith shops; second floor, 17 sleeping apartments; frame; steam heat; gas lighting; cost \$3000; work by school's mechanics; V. L. Golden, Georgetown University, prepared plans and will supervise construction; no bids.

Ga., Donaldsonville.—Holiness Nazarene Church will erect college.

La., Angie.—Washington Parish School Board, J. W. Bateman, superintendent, has plans by J. O. Edgar, Franklinton, La., for school building recently noted; frame; cost \$3000; date of opening bids not determined.

La., Fish Pond.—Concordia Parish Police Jury, Vidalia, La., will erect school.

La., Hammond.—City will probably vote on school and sewerage bond issue. Address The Mayor.

La., Monterey.—Concordia Parish Police Jury, Vidalia, La., will erect three-room addition to high-school building.

N. C., Asheville.—City plans expending \$17,000 for improving and enlarging high-school building. Address The Mayor.

N. C., Elizabeth City.—L. S. Blades, W. L. Cohoon and S. L. Sheep, committee, will receive bids until November 15 for erection of three-story dormitory for Colored State Normal School; plans and specifications at office of S. L. Sheep.

N. C., Leaksville.—City has plans by Hook & Rogers, Charlotte, N. C., for eight-room school.

Tex., Batesville.—Zavilla County Common School District No. 7 will probably issue \$20,000 of bonds for school improvements. Address District School Trustees.

Tex., Fort Worth.—Waller & Field, architects, Fort Worth, will receive bids until November 25 for erection of three reinforced concrete and brick buildings for Texas Christian University; certified check for \$1000; plans and specifications at office of architect.

Tex., Linden.—City will erect high-school building to replace structure reported burned. Address The Mayor.

Tex., Marshall.—Marshall School Board will receive bids at office of S. E. Wood, secretary, until November 19 for erection of brick and wood school building; certified check for \$500; plans at office of Waller & Field, architects, Fort Worth, Tex., and of C. G. Lancaster, Marshall.

Tex., San Leon (not a postoffice).—J. M. Carlisle of Arlington, Tex., will establish Car-

Hale Military Institute; will erect building with 101 living-rooms; steam heat; brick and concrete; fireproof; separate plants for power, lights and water; cost \$100,000; plans by C. D. Hill, Houston, Tex.

STORES

Ala., Birmingham.—Jackson Hill will erect two one-story frame buildings; cost \$2400.

Ala., Birmingham.—R. T. Pittman will D. C., Washington.—Alex. Millar, 1215 Ohio Ave. N. W., will erect six dwellings at 56 to 60 Adams St. N. W.; two stories; brick; cost \$19,200; plans and construction by owner.

Fla., Jacksonville.—Brown Realty Co. will expend \$2500 to erect dwelling recently noted; six rooms; 20x40 feet; ordinary construction; electric lighting; plans and construction by owner.

erect two-story brick-veneered building; cost \$4000; day labor.

Ga., Atlanta.—T. H. Pitt will erect \$12,500 building.

Ky., London.—First National Bank and J. B. Catching will rebuild Catching block reported burned; loss \$100,000.

La., Ruston.—W. C. McMurray will erect one-story store building; 30x90 feet; brick; J. R. Randolph may be addressed. (See "Machinery Wanted.")

Md., Baltimore.—Charles R. Becker, 429 North Carey St., has plans by W. M. Gleske, 66 Gunther Bldg., Baltimore, for alterations and three-story brick addition to store at Hollins and Carey Sts.; cost \$5000.

Mo., St. Louis.—Bert H. Lang of Lang Commission Co. will erect business building at 3d and Elm Sts.

Mo., St. Louis.—Seventeenth Street Realty Co., 1610 Washington Ave., will not erect mercantile building, as was recently stated.

N. C., Lowell.—Spencer Mountain Mills will erect store and office building to replace structure reported burned; loss \$7500.

Okla., Oklahoma City.—J. P. Martin, 301 North Western Ave., has plans by L. C. Stone (address, care of Mr. Martin) for store building recently noted; two stories; 50x140 feet; ordinary construction; gas heat; electric lighting; cost \$20,000; no contracts.

Okla., Oklahoma City.—Anton H. Classen, president of Oklahoma Railway Co., will erect Terminal Arcade building; three one-story buildings; brick; fireproof; reinforced concrete and red vitrified paving brick.

Tex., Borne.—Vogt, Laver & Vogt will erect store building.

Tex., Dallas.—S. H. Kress & Co., 296 Broadway, New York, will erect store building; three stories; fireproof; steel and brick construction; 70x100 feet; cost \$50,000. (Recently noted.)

Tex., Del Rio.—College Heights Addition Co. will erect building; one story; brick; cost \$8000 to \$10,000.

Tex., Del Rio.—L. Trawalter will erect two-story brick building; cost \$10,000 to \$12,000; lower floor stores; upper floors offices.

Tex., Greenville.—J. M. Gee will erect building to replace structure recently reported burned; loss \$6000.

Tex., Greenville.—Mrs. Lizzie Mitchell will rebuild structure recently reported burned; loss \$6000.

Tex., Greenville.—Mrs. Bertha V. Samuell will rebuild store recently reported burned; loss \$6000.

Tex., Houston.—Krupp & Tully will erect six-story concrete and terra-cotta building. (Previously noted.)

Tex., San Benito.—Frank T. Phillips will erect 40x90-foot store building; ordinary construction; cost \$4500. (Recently noted.)

W. Va., Huntington.—United Woolen Mills will erect store building; three stories.

THEATERS

Md., Baltimore.—Empire Theater Co., represented by Geo. W. Rife, 1 North Calvert St., has plans by W. H. McElfrick, Philadelphia, Pa., for theater at 311-17 West Fayette St.; brick and concrete; fireproof; three stories; 15x100 feet; cost \$100,000; Otto G. Simonson, American Bldg., Baltimore, associate architect; architects will receive bids January 1. (Previously noted.)

Miss., Greenville.—Samuel J. Stein contemplates erection of theater; 60 feet by 37 feet 6 inches; seating capacity, 1000 to 1200; cost \$75,000.

WAREHOUSES

Ala., Birmingham.—Smith Realty & Development Co., recently reported incorporated with \$15,000 capital stock, has plans by H. B. Wheelock, Birmingham, for warehouse; 50x162½ feet; three stories; mill construction; electric elevator; cost \$20,000; bids opened.

Fla., Jacksonville.—Delcher Bros. have engaged H. I. Snyder as engineer and M. C. Greeley as consulting architect, 6 Baldwin Bldg., Jacksonville, to prepare plans for warehouse recently noted; 10 stories; reinforced concrete skeleton and brick curtain walls; metal windows, rolling steel doors, tile partitions; composition roof on concrete slab, metal cornices and iron stairs; one passenger and one freight elevator; cost \$150,000; bids opened November 10.

La., New Orleans.—Illinois Central Railroad Co., A. S. Baldwin, chief engineer, Chicago, Ill., will erect 75x550-foot warehouse and office building; reinforced concrete construction; hot-water heat; electric lighting; cost \$150,000. (Recently noted.)

Md., Baltimore.—A. Schuman, 417 West Franklin St., is having plans prepared by William A. Foreman, 215 Courtland St., Baltimore, for warehouse at 325 West Pratt St.;

BUILDING CONTRACTS AWARDED

BANK AND OFFICE

D. C., Washington.—Fred A. Schmidt, 516 9th St. N. W., awarded contract to Boyle-Robertson Construction Co., 15th and H Sts. N. W., Washington, to erect five-story office and store building on G St. between 12th and 13th Sts.; plans by Appleton P. Clark, Union Trust Bldg., Washington.

Tenn., Memphis.—Chickasaw Building Co., J. N. Falls, president, awarded contract, as lately reported, to Valley Construction Co., Memphis, to erect office building; general contract, \$200,000; reinforced concrete skeleton contract (designing and erecting) awarded at about \$80,000 to Southern Ferro-Concrete Co., Equitable Bldg., Atlanta, Ga.; 10 stories and basement; 100x150 feet; brick curtain walls; architect, John Galsford, Memphis.

Tex., Kingsville.—St. Louis, Brownsville & Mexico Railway, E. C. Burgess, engineer maintenance of way and construction, has, it is reported, awarded contract for erection of general office building; six stories; elevator.

Tex., Truscott.—Chesser & Masterson awarded contract to Albert Wirz, Seymour, Tex., to erect building for Bank of Truscott; structure will be of brick, 25x50 feet.

CITY AND COUNTY

Fla., Miami.—Dade County Commissioners have plans by and awarded contract to John Muller, 1015 Ave. E, Miami, for erection of six buildings on county poor farm; one building 31x32 feet, three 14x24 feet, two 22x30 feet; one story; concrete construction; cost \$4965. (Recently noted.)

Tenn., Memphis.—Police Station.—Police Station Commission awarded contract at \$259,000 to James Alexander & Co. of Memphis for erection of Central Police Station; plans by Shaw & Pfeil, 1503 Tennessee Trust Bldg., Memphis. (Recently noted.)

DWELLINGS

D. C., Washington.—W. A. Bevard, 1745 P St. N. W., awarded contract to W. K. Reeve, 1219 30th St. N. W., Washington, for two-story brick dwelling at 1759 P St. N. W.; cost \$7500; plans by A. B. Mullett & Co., Union Trust Bldg., Washington.

Fla., Jacksonville.—Mrs. E. J. C. Wright, 1418 Main St., awarded contract to Tucker & White, Jacksonville, for erection of two-family dwelling recently noted; two stories; 25x31 feet; cost \$5000.

Ga., Dublin.—Dr. Frank Bright has plans by and awarded contract to R. B. McGeeckin, Dublin, for erection of dwelling recently noted; 52x64 feet; ordinary construction; electric lighting; cost \$3750. (See "Machinery Wanted.")

Ga., Savannah.—A. J. Ives awarded contract to Woolard & Cunningham, Savannah, for erection of residence; brick; slate or tile roof; plans by Wallin & Young, Savannah.

Ky., Louisville.—A. R. Smith awarded contracts for erection of dwelling recently noted; 11 rooms; 42x51 feet; ordinary construction; brick; hot-air (recirculating) heat; electric lighting; plans by McDonald & Dodd, Louisville.

La., New Orleans.—Mrs. M. G. Bulger awarded contract for erection of dwelling recently noted; seven rooms; 79x39 feet; mill construction; hot-air heat; cost \$5500; plans by Diboll & Owen, 325 Baronne St., New Orleans.

Md., Baltimore.—Walter Stahl, 228 North Poppleton St., awarded contract to James F. Morgan, 1300 South Charles St., Balti-

40x159 feet; four stories; brick and stone; concrete foundation; slag roof; girders of wrought steel; structural iron framework; fireproof throughout; local contractors to submit bids. (Recently mentioned.)

Mo., Rich Hill.—People's Elevator Co. contemplates erecting storehouse.

S. C., Greenville.—Carolina Supply Co. will, it is reported, erect three-story warehouse to cost \$9000 to \$10,000; site 70x125 feet.

Va., Richmond.—American Tobacco Co., 215 Fifth Ave., New York, will build 14 storage sheds; each 102 feet 8 inches, one story high; capacity, 20,000 hogsheads tobacco; material to include 50,000 feet wire cloth, 64,000 feet corrugated galvanized iron and 2300 squares composition roofing; construction contracts to be awarded separately under supervision of E. T. Mankin of Mankin Construction Co., 812 East Main St., Richmond. (See "Machinery Wanted.")

more, for erection of six dwellings on Presstman St. between 10th and 11th Sts.; frontage 15 feet each; two stories; plans by F. E. Beall, 213 St. Paul St., Baltimore.

Md., Baltimore.—J. Olney Norris, Chamber of Commerce Bldg., awarded contract to John E. Marshall & Son, 121 Mercer St., Baltimore, for erection of addition and improvements to residence at 1124 Madison Ave.; cost \$3000; plans by Chas. E. Cassell, Law Bldg., Baltimore. (Lately noted.)

Md., Barrellsville.—Cumberland Basin Coal Co., Roy A. Hatfield, president, Philadelphia, Pa., awarded contract to W. A. Liller of Keyser, W. Va., for erection of 20 miners' dwellings.

Md., Baltimore.—W. Elbert Sexton, 800 Reservoir St., awarded contract to A. K. Boteler, 1323 Myrtle Ave., Baltimore, for erection of residence at Roland Heights and Belvidere Aves.; two and a half stories; frame; tin roof; steam heat; gas and electric lights; cost \$10,000; plans by Mottu & White, 322 North Charles St., Baltimore. (Previously noted.)

Md., Baltimore.—Davison Chemical Co., 601-62 Keyser Bldg., awarded contract to L. O. Hildbrand & Bro., 529 Law Bldg., Baltimore, for erection of cottage for superintendent; two and a half stories; frame; 30x32 feet; steam heat; electric lighting.

Md., Roland Park.—Geo. F. Sloan, Jr., awarded contract to Roland Park Co., 408 Roland Ave., Roland Park, for erection of residence; two and a half stories; ornamental frame and stucco; hardwood floors; electric lights; hot-water heat; cost \$10,000; plans by E. L. Palmer of Roland Park Co., 408 Roland Ave., Roland Park.

Tex., Dallas.—J. H. Cravens will erect residence; eight rooms; mill construction; cost \$2750; contract awarded to E. J. Brown, Dallas; materials purchased.

Tex., Goliad.—L. Seeligson awarded contract to Mr. Dietz of Batesville, Tex., for erection of dwelling.

Tex., El Paso.—E. A. Moss, 1218 North Campbell St., awarded contract for erection of dwelling recently noted; one story and basement; ordinary construction; hot-air heat; electric lighting; cost \$4000; plans by E. E. Graham, 419 California St., El Paso.

Tex., Lockhart.—Mr. Harrison awarded contract for erection of \$5000 dwelling.

Tex., Bastrop.—H. B. Combs awarded contract for erection of residence.

W. Va., Elm Grove.—Harry Silger awarded contract to Amos & McCormick, Elm Grove, for erection of residence.

GOVERNMENT AND STATE

Tex., Port Arthur.—Postoffice and Court-house.—Government awarded contract to Thomas Lovell & Sons, Denton, Tex., at \$110,468 to erect U. S. postoffice and custom-house. (Previously mentioned.)

HOTELS

Ark., Heber Springs.—Cyrus E. Crosby will expend \$14,000 to remodel hotel building; 70x150 feet, with L 28x40 feet; mill construction; heating plant to cost \$2900; electric wiring; contract recently noted awarded to A. B. Carrier, Heber Springs.

Ark., Heber Springs.—Cyrus F. Crosby has plans and awarded contract to A. B. Carrier, Heber Springs, to erect hotel recently noted; two stories; 50 rooms; 150x85 feet; fireproof construction; steam heat; electric lighting; running hot and cold water; cost \$18,000. (See "Machinery Wanted.")

MISCELLANEOUS

Fla., Jacksonville.—Stable.—W. J. Cook Transfer Co. awarded contract to O. P. Wood-

cock of Jacksonville to erect livery stable; two stories; 210x105 feet; brick; metal roof; upper floor to be used exclusively for vehicles; stable to provide for 200 head of stock.

Md., Baltimore.—Stable.—Joseph S. Wernig, 1215 to 1229 Goodwin St., awarded contract to Frederick Decker & Sons, 1219-1221 East Biddle St., Baltimore, to erect addition to building; two stories; 30x105 feet; brick and stone; concrete foundation; steel girders and structural iron; slag roof.

RAILWAY STATIONS

D. C., Washington.—Washington Terminal Co. secured permit for proposed repairs to Union Station; estimated cost, \$15,000; company is architect and contractor.

N. C., Newbern.—Norfolk & Southern Railroad, F. L. Nicholson, chief engineer, Norfolk, Va., will rebuild freight depot recently noted burned; cost \$12,000; size 40x300 feet; mill construction; iron siding; electric lighting; contract awarded to Rhodes & Underwood, Newbern.

N. C., Camden.—Southern Railway, D. W. Lum, chief engineer, Washington, D. C., awarded contract to Porter & Boyd, 908 Realty Bldg., Charlotte, N. C., for erection of passenger station previously noted; frame; pebble-dash and tile roof; cost \$5000.

Tex., Dallas.—Houston & Texas Central Railroad awarded contract to Texas Building Co. of Dallas to erect freight depot; fireproof; reinforced concrete; exterior finish of brick and stucco; freight warehouse portion of building will be one story, about 70x145 feet, and equipped with nine steel rolling doors on each side; remaining portion will be two stories, about 70x55 feet; first floor to contain parcel freight room, etc., and second floor offices. (Recently mentioned.)

SCHOOLS

La., Franklinton.—City awarded contract to J. O. Edgar, Franklinton, for erection of fireproof building; 10 rooms; auditorium seating capacity, 400; plans by Stephens & Nelson, New Orleans.

Miss., Columbus.—Industrial Institute and College awarded contract at \$57,704.50 to McClanahan & Terry of Columbus for structural work on combined dormitory and dining hall, and at \$9,988.60 to F. M. Jacobs of Columbus for plumbing; plans by R. H. Hunt, James Bldg., Chattanooga, Tenn. (Recently noted.)

S. C., Columbia.—Lutheran Theological Seminary awarded contract at \$40,157 to Wise Granite Co., Wise, N. C., for erection of administration building; 2½ stories; slate roof; 169x90 feet; steam heat. (Previously noted.)

Miss., Richton.—City awarded contract to Burke Bros. & Fleming, Hattiesburg, Miss., for erection of \$10,000 school; plans by R. E. Lee, 203 Keys Bldg., Hattiesburg, Miss. (Recently noted.)

N. C., Mocksville.—City awarded contract to D. K. Cecil, Concord, N. C., for erection of \$7000 graded-school building.

STORES

Ala., Birmingham.—J. E. Hood awarded contract to Meeks & Lively, Birmingham, for erection of two one-story frame buildings; cost \$3000.

Ala., Birmingham.—B. M. Gray awarded contract to W. G. Oliver, Birmingham, for erection of six one-story frame buildings; cost \$2400.

Ala., Birmingham.—Ben Holzer awarded contract to H. Pool, Birmingham, for improvements to brick building; cost \$4000.

Ala., Mobile.—Weinacker Bros. awarded contract to E. E. Ward, Mobile, for erection of two-story department store; 100x100 feet; plans by Downey & Denham, Mobile. (Previously noted.)

D. C., Washington.—Fred A. Schmidt, 516 9th St. N. W., awarded contract to Boyle-Robertson Construction Co., 15th and H Sts. N. W., Washington, for erection of store and office building on G St. N. W.; 31x28x60 feet; ordinary construction; steam heat; electric lighting; electric elevator; cost \$30,000; plans by Appleton P. Clark, Jr., Union Trust Bldg., Washington.

Fla., Miami.—E. L. Brady Grocery Co. has plans by and awarded contract to John Muller, Miami, for erection of proposed store building; 50x80 feet; concrete construction; cost \$1200.

Tex., Franklin.—F. S. Estes has plans by and awarded contract to F. Carpenter (address, care of Mr. Estes) for erection of business building; two stories; 27x105 feet; fireproof construction; electric lighting; cost \$5000. (See "Machinery Wanted.")

Tex., Orange.—T. S. Edwards will expend \$9000 to erect store building; 100x40 feet; one story; fireproof construction; plans by A. Babin, Beaumont, Tex.; contract recently noted awarded to E. J. Chauvin, Orange; materials purchased and construction begun.

Tex., San Benito.—J. P. Dyer awarded contract to L. Fleming (address, care of Mr. Dyer) for erection of \$4000 brick store building.

Tex., San Benito.—K. C. Smith awarded contract to W. H. Briggs (address, care of Mr. Smith) for erection of \$6000 two-story brick store building.

Va., Norfolk.—A. Lenguin awarded contract to F. N. Henley, Norfolk, for erection of frame building on 9th St. near Mahone Ave.; cost \$1500.

THEATERS

Mo., Kansas City.—Joseph D. Fisher awarded contract to H. L. Stevens, Kansas City, for erection of theater; seating capacity, 600; 60x130 feet; concrete, brick and steel;

lobby finished in marble and tile; stage 24x50 feet; front finished in red brick with buff brick and terra-cotta trimmings; cost \$25,000.

WAREHOUSES

Md., Baltimore.—J. Wilson Leakin, 705 Fidelity Bldg., will erect warehouse at 113 West Fayette St.; estimated cost, \$10,000; Willard E. Harn, 213 North Calvert St., Baltimore, is architect and contractor.

Md., Baltimore.—J. W. Harvey & Son, Union Trust Bldg., agents for Mrs. Virginia Bolton, awarded contract to James J. O'Connor, 427 East Lexington St., Baltimore, to erect addition to warehouse at 102 West Lombard St.; 31x40 feet; hot-air heat; cost \$3000. (Recently mentioned.)

Tenn., Memphis.—Binswanger & Co., 4 East Calhoun St., awarded contract to C. B. Barker & Co. of Memphis at \$18,000 to erect warehouse; three stories; foundation and basement of concrete; balance of brick; mill construction; composition roof; estimated total cost (building and site), \$50,000.

to have been let by the Coffeyville-Nowata Railway & Power Co. to Robert L. Plunkett of Coffeyville, Kans. W. V. Thraves of Nowata is general manager.

Tenn., Harriman.—A report from Knoxville says that J. R. McDowell, who was given the contract for 17½ miles of construction on the Harriman, Knoxville & Eastern Railway, has awarded subcontracts to the F. W. Hunt Contracting Co., the Cross Construction Co., A. G. Fretwell, M. M. Shultz, George L. Davidson and Edlington & Pack.

Tex., Beeville.—Reported that the Nueces River Valley Railroad Co. will soon let contracts for its proposed line from Beeville to Eagle Pass, Tex., 180 miles, via Simmons City, Tilden and Carrizo Springs. W. A. Frisby of Beeville is president and G. A. Hubb engineer of construction. A later report says that 60 miles have been put under contract.

Tex., Brownsville.—A dispatch says that clearing right of way has begun for the proposed belt line railroad from a point near Brownsville, on the St. Louis, Brownsville & Mexico Railway, to sugar plantations, about 12 miles, and grading is to start immediately. C. L. Jessup of Brownsville and others are reported interested. E. C. Burgess, engineer of construction, Kingsville, Tex., may give information.

Tex., Dalhart.—The Enid, Ochiltree & Western Railway is reported to have finished 10 miles of line from Dalhart east to Victory, Tex., and it will be put in operation immediately.

Tex., Houston.—Charles M. Boren is reported to have begun survey for the Bay Shore Rapid Transit Railway from Houston to La Porte, Tex., about 40 miles, where Oscar L. Allen will have charge of the work. Mr. Boren is also chief engineer for the West Sulphur Co. at Sulphur, La.

Tex., Jourdanston.—C. S. Young, with temporary headquarters in San Antonio, Tex., is reported promoting the Bonita Valley Rapid Transit line for an electric railway from Jourdanston to Pleasanton, Tex., and is quoted as saying necessary subscriptions are made. R. J. Herbert of London is also said to be interested.

Tex., San Antonio.—Vories P. Brown of San Antonio, says a report, is promoting plans for an electric interurban railway, which will be chartered about January 1 with \$2,000,000 capital to build a line from San Antonio to Austin, Tex., about 80 miles, with possibly branches to Lockhart, Luling and Seguin. Walter H. Zimmerman of Chicago, consulting engineer for the Marble Falls Water Power Plant, is reported to have investigated the line with a view to furnishing electricity.

Tex., Pecos.—President W. L. Carville of the Pecos Valley Southern Railway is quoted as saying that the company is considering plans to extend to a connection with the Southern Pacific Railway. On November 15 35 miles of completed line will be open for traffic.

Tex., Hughes Springs.—A telegram says that L. P. Featherstone of Galveston, president of the Gulf & Interstate Railway, met Chief Engineer F. P. James of the "Ore Line Railway Co.," and that a satisfactory line has been located to the ore fields near

Hughes Springs. Further survey will be made.

Tex., Texico.—The Texico, Farwell & Gulf Railroad Co., according to a dispatch, is about to begin construction on its line from Texico via Farwell southward 100 miles. The J. F. Galback Construction Co. of Portland, Ore., the contractor, is assembling machinery and forces.

Va., Richmond.—Concerning the report that Gov. Wm. Hodges Mann of Virginia was said to be interested in the Richmond, Urbanna & Peninsula Railway, which proposes to build a line between West Point and Urbanna, Va., the Manufacturers Record is informed that he has no pecuniary interest in the road, but as Governor, desiring the progress and development of the State, he is doing what he properly can to secure its construction.

W. Va., Gassaway.—The Braxton Split Coal Co., recently incorporated with \$300,000 capital, will, it is reported, build railroads to develop its properties near Frametown, in Braxton county. Incorporators: Allen H. Fitzner of Gallon, O.; Neal Melsner, Don M. Osborne, H. C. Bradley and George G. Meier, all of Cleveland, O.

W. Va., Ireland.—An officer of the Baltimore & Ohio Railroad says that nothing is being done at present toward locating a line from Hampton, on the Pickens Division, to Holly Junction, W. Va., for the purpose of revising grade.

W. Va., Logan.—A. T. Bears, superintendent of construction for the contractors, is reported as saying that grading is practically completed on the extension of the Guyandotte Railroad from a point one mile above Logan to the mouth of Huffs Creek. Carpenter & Boxley are the contractors.

STREET RAILWAYS

Ala., Birmingham.—Application has been made for city franchise to build 3½ miles of street railway from the end of the Wylam line of the Birmingham Street Railway to a new mine, No. 13, beyond Gary-Ensley. Franchise and right of way are secured in the county. Estimated cost, \$50,000. The Alabama Railway & Electric Co. will be incorporated to build it by Roger W. Snyder, Max Blach, Joseph Martin, W. W. Crawford, W. A. Spencer, W. J. Stacy, T. P. Frierson and others.

Ala., Montgomery.—Incorporation papers are filed for the Alabama Traction Co. to begin business with \$250,000 paid-in capital and \$1,000,000 authorized, for the purpose of building a new street railway in Montgomery. Chas. G. Abercrombie of Montgomery, Ala., is president; Chas. F. Woodward of Wakefield, Mass., vice-president; John J. Flowers of Montgomery, secretary and treasurer. Other stockholders are B. Frank and Henry M. Hobbie. Construction will start, it is reported, as soon as material orders are filled.

N. C., Asheville.—The Asheville Electric Co., it is reported, has awarded contracts to B. J. Luther & Co. for part of the grading on the extension to West Asheville and Jarrett's Store, about two and one-half miles.

Tex., Brownsville.—Theodore Stegner of Kansas City will, it is reported, apply for franchise to build an electric street-railway system in Brownsville.

RAILROAD CONSTRUCTION

RAILWAYS

Ala., Birmingham.—President J. M. Dewberry of the Piedwater Railroad Co. is reported as saying that contract has been let to a large firm to build 46 miles of its proposed electric railway between Eastlake and Bessemer through Birmingham. The entire line when completed will run from Gadsden via Birmingham to Tuscaloosa, Ala. President Dewberry is quoted as saying that franchises have been arranged and work will begin in the city as soon as the company's bond is approved by the municipal authorities. The franchise requires that construction shall begin within 90 days.

Fla., Bartow.—An officer of the Charlotte Harbor & Northern Railway says that it is not contemplated at present to do any new construction. This refers to a recent report that the company might extend through Mulberry to Lakeland. It is building three miles from Pierce to Mulberry, contract being let for trestle work and grading. The company will lay the track.

Fla., Haines City.—The contract reported awarded to N. G. Wade & Co. of Jacksonville, Fla., for a branch of the Atlantic Coast Line from Haines City to Avon Park and the Caloosahatchee River, including Frost-proof and Lake Jackson, covers, it is said, 52 miles of new line.

Fla., Trenton.—The Cummer Lumber Co. is reported to have built eight miles of substantial main line railroad and to have connected it with the Atlantic Coast Line at Trenton. There are also four miles of branches.

Ga., Vidalia.—A dispatch says that preliminary survey has begun for the Vidalia & Southeastern Railway, recently chartered to build from Vidalia to Fleming, Ga., 70 miles. F. R. Durden of Savannah and W. O. Donovan of Macon are among those interested.

Ky., Covington.—With reference to the report that the Louisville & Nashville Railroad had prepared plans for a new yard at De Coursey, near Covington, an official says that construction of such a yard has not been authorized.

Ky., Paris.—D. B. Lacey & Sons of Birmingham, Ala., are reported pushing grading on the new yards of the Louisville & Nashville Railroad in South Paris. There will be 24 tracks besides buildings.

Ky., Pikeville.—An official of the Chesapeake & Ohio Railway wires that the construction of a line from a point near Pikeville has not been decided upon. An officer of the Consolidation Coal Co., whose lands will be reached by the contemplated road, says it will be built by the coal company, but construction will not be undertaken until winter is over. It will cost about \$1,000,000. Route is from Shelby, on the Chesapeake & Ohio's Big Sandy division, about 8 miles south of Pikeville, southwest to Shelby Gap (23 miles), thence to Potter Gap and beyond to a terminus in the heart of the coal fields. It will follow Shelby creek and will be altogether 30 miles long.

La., Athens.—The Athens & Southeastern Railroad Co., capital \$100,000, is reported organized at Athens to build a short line. Harry R. Swartz of St. Louis, Mo., is president; J. E. Kennedy of Athens, La., vice-president; J. T. Fleishel of St. Louis, secretary; Marcus L. Fleishel of Fullerton, La., treasurer. The latter is general manager of the Gulf Lumber Co., and all are reported interested in the Chicago Lumber & Coal Co.

La., Frogmore.—The Tensas River Lumber Co., says a letter to the Manufacturers Rec-

ord, will build three miles of railroad near Jonesville, connecting with the Natchez & Southern Railroad at Frogmore.

La., Jena.—H. Knobel is reported making survey for an extension of the Louisiana & Arkansas Railroad from Jena to Vidalia, La., about 40 miles. William Buchanan is president at Texarkana, Ark.

La., Vinton.—Capitalists of Houston, Tex., says a dispatch, contemplate building a railroad to connect with the Southern Pacific at Vinton and extend thence to the oil fields. The Mayor of Vinton may be able to give information.

Md., Hagerstown.—Major L. N. Downs confirms report that preliminary survey is being made for a contemplated electric railway from Hagerstown via Clear Spring, Md., to Mercersburg, Pa., 27 miles, and says it seems likely that a company will be organized and the road built.

Mo., Cape Girardeau.—An officer writes that the Cape Girardeau, Charleston & Hickman Railroad Co. has been chartered to build a line 52 miles long from Anell to Dorena via Kelso and Charleston, Mo. Route is through level country. Contract is let to Louis Houck, but subcontractors are wanted. The incorporators are Gibony Houck, president; Ralph H. Schultz, secretary-treasurer; Charles G. Juden, William H. Bohnsack and Charles T. Lewis, all of Cape Girardeau, Mo.

Mo., Linn.—The Missouri Osage Railroad Co. has been chartered to build a line from Linn, in Osage county, to Wardsville, in Cole county, about 20 miles, via Osage City; capital \$250,000. The stockholders are H. C. Avis, Alfred K. Prince, Fage Nelson and Alphonse Dur of St. Louis, and M. A. Greding of Alton, Ill.

Mo., New Madrid.—Construction is reported begun on the proposed St. Louis & Southern Missouri Railroad.

N. C., Rutherfordton.—George L. McKay, general manager of the Isothermal Traction Co. is reported as saying that financial contracts have been closed for the proposed line from Gastonia via Rutherfordton to Asheville, N. C., about 100 miles. K. S. Finch of Charlotte, N. C., is president.

N. C., Spray.—The North Carolina & Virginia Railroad Co. has been chartered, says a dispatch to build a line from Spray to Ridgeway, Va., of which six miles will be in North Carolina and 16 miles in Virginia. The incorporators are J. D. Huffines and P. W. Glidewell of Rockingham county, North Carolina; P. M. Smith, E. C. Wing, E. G. Demorest and B. H. Smith of New York county, N. Y.

N. C., Stackhouse.—The Madison County Railway Co. of Stackhouse, capital \$50,000, has been chartered to build a line from Stackhouse to Allenstand, N. C., 10 miles. E. B. McMillan and others are the incorporators.

Okla., Ardmore.—An officer of the Arbuckle & Western Railroad Co. is quoted as saying that grading is expected to begin within 30 days. Contracts not yet awarded. The proposed route is from Ardmore to Chickasha, Okla., 110 miles, with a branch from Milo to Lawton, 80 miles. Oscar O. Ayres is president and acting chief engineer at Ardmore, Okla.

Okla., Lawton.—L. T. Poole of Oklahoma City confirms the report that he contemplates the construction of a railroad from Lawton, Okla., to Wichita Falls, Tex.

Okla., Nowata.—Contract for construction of an electric railway from Coffeyville, Kans., to Nowata, Okla., 23 miles, is reported

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

Air Compressors.—Norton Machinery Co., 610 Baymiller St., Cincinnati, O., wants prices on 1000 to 1500 cubic foot steam-actuated air compressors, good for 100 pounds air pressure (Ingersoll-Rand preferred), straight crank and flywheel type; also one 200 to 300 cubic foot belt-driven compressor, good for 100 pounds air pressure.

Aluminum Novelties.—Van Zandt Plumbing & Heating Co., 1111 Houston St., Fort Worth, Tex., wants names and addresses of manufacturers of aluminum novelties.

Bakery Equipment.—T. R. Dabbs, Marble Falls, Tex., will want bake ovens, dough mixer, etc.

Bath Equipment, etc.—Cyrus F. Crosby,

Heber Springs, Ark., wants prices on bath equipment, septic tanks, etc.

Beltinz, Shafting, etc.—Greenville Mantel & Novelty Co., Greenville, S. C., wants prices on belting, hangers and shafting.

Boilers.—Cyrus F. Crosby, Heber Springs, Ark., wants prices on boilers.

Bricks.—See "Building Materials."

Bridge Construction.—Bids will be received at Clerk's office, Madison, Va., until noon November 22 for construction of three steel bridges—two 50 feet long and one 40 feet long—in Madison county, Virginia; plans and specifications on file at office of P. St. J. Wilson, State Highway Commissioner, Richmond, Va., and office of Clerk of Madison

county, Madison, Va.; certified check for \$200 to accompany each bid. Further information furnished on application to office of State Highway Commissioner.

Briquetting Machinery.—C. T. O'Ferrall, Dillon, S. C., wants names and addresses of manufacturers of coal-briquetting machinery.

Broom Machinery.—R. A. Wooten, Dennis Mills, La., wants names and addresses of manufacturers of broom machinery.

Building Materials.—Portsmouth Cotton Oil Refining Corporation open for bids for steel work, tanks and other material to rebuild burned refinery; Hermann Aspegren, engineer in charge, Portsmouth, Va.; John Aspegren, president, Produce Exchange Bldg., New York.

Building Materials.—W. S. Morehead, Ballinger, Tex., wants prices on building material.

Building Materials.—Cecil L. Saunders, chamber of Commerce Bldg., Cleveland, O., in market for common and pressed brick, Portland cement, cement plaster, yellow-pine framing timber and mill work; wants subcontractors to figure on cut stone and granite, plumbing and heating, electrical work, marble trim, terrazzo floors, painting and sheet metal work; for constructing \$68,000 U. S. postoffice at Temple, Tex.; contractor's representative will be in Temple after November 29.

Building Materials.—Dr. Frank Bright, Dublin, Ga., wants prices on mantels, sash and doors.

Building Materials.—J. R. Randolph, Ruston, La., wants prices on plate glass, lime, cement, composition roofing and lumber.

Building Materials, etc.—T. M. Street, care of Business League, Grenada, Miss., wants prices on building materials, iron tanks, etc.

Castings, etc.—Climax Heating Co., 619 First National Bank Bldg., Birmingham, Ala., wants prices on small castings, hollow wire and connections.

Cement.—See "Building Materials."

Cement.—Office of City Engineer, Chas. E. Poling, Richmond, Va. Sealed proposals will be received until 4 P. M. November 16 for furnishing 6000 barrels Portland cement (Old Dominion, Lehigh, Atlas, Alpha and Nazareth), to be delivered along the different lines of work in wooden barrels; specifications of requirements of tests, etc., on file; right to increase or decrease quantity 20 per cent. and right to reject any and all bids reserved by committee on streets; certified check for \$250, payable to City Treasurer, must accompany each bid as guaranty of execution of contract.

Corn Mill Machinery.—Bank of Blue Mountain, Blue Mountain, Miss., wants information on machinery for crushing ear corn with shuck.

Crane.—Department of Public Improvements, Subdepartment Harbor Board, Baltimore, Md. Proposals for furnishing locomotive crane of standard type as manufactured by Browning Engineering Co. of Cleveland, Industrial Iron Works of Bay City, or Brown Hoisting Machinery Co. of Cleveland, will be received until 11 A. M. November 16. Proposals must be addressed to Board of Awards and sent to City Register's office, City Hall, accompanied by certified check of bidder on some clearing-house bank for \$100, payable to Mayor and City Council of Baltimore; Board of Awards reserves right to reject any or all proposals; specifications can be had at Harbor Board office; O. F. Lackey, Harbor Engineer.

Crane.—John MacD. Greene, Drexel Bldg., Philadelphia, Pa., wants prices on second-hand 10-ton standard-gauge self-propelled locomotive crane.

Concrete Wharf.—Sealed proposals received until 4 P. M. December 2 for specifications, plans and detail drawings for building reinforced concrete bulkhead wharf on James River; plan and profile on file; certified check for \$500, payable to City Treasurer, as guarantee to accompany each bid; committee on James River Improvement reserves right to reject bids; Charles E. Bolling, City Engineer, Richmond, Va.

Cotton Picker.—E. A. Moore, 51 Jane St., Waycross, Ga., wants information relative to small machine for picking mattress material, such as cotton, moss, hair and wool.

Crosscutting Machinery, etc.—Central Loan & Trust Co., John R. Hoffman, secretary-treasurer, First National Bank Bldg., Burlington, N. C., wants information, prices, etc., on machinery for crosscutting crossarms, paving blocks, etc.; also desires correspondence with manufacturers of or dealers in crosscut.

Dental Lavatories.—Van Zandt Plumbing & Heating Co., 1111 Houston St., Fort Worth,

Tex., wants names and addresses of manufacturers of dental lavatories.

Electrical Equipment.—Dr. Frank Bright, Dublin, Ga., wants prices on electrical equipment for dwelling.

Electrical Equipment.—W. S. Morehead, Ballinger, Tex., wants prices on electrical equipment.

Electrical Equipment.—Sealed proposals in duplicate will be received at Department of Interior, Washington, D. C., until 2 P. M. November 17, and then opened, for installation of steam engines, electric generators and switchboard for central power plant at Freedmen's Hospital and Howard University; proposals must be securely enveloped, marked "Proposals for installation of steam engines, etc., central power plant of Freedmen's Hospital and Howard University," and addressed to Secretary of Interior; James E. Wilson, Assistant Secretary.

Electrical Equipment.—Cyrus F. Crosby, Heber Springs, Ark., wants prices on electrical equipment for \$18,000 hotel.

Electrical Machinery.—Greenville Mantel & Novelty Co., Greenville, S. C., wants prices on 20-horse-power inductor motor.

Electrical Machinery.—Norton Machinery Co., 610 Baymiller St., Cincinnati, O., wants prices on 100-kilowatt 200-volt direct-current direct-connected engine and generator.

Electrical Machinery.—Bartlesville Oil Refining Co., W. H. Coutant, manager, Oklahoma City, Okla., wants prices on electrical equipment for 200 lights.

Electric-light Plant.—Office of Commissioners District of Columbia. Proposals will be received until 2 P. M. November 12 for furnishing and erecting complete electric-lighting plant for temporary buildings of workhouse at Occoquan, Va.; specifications and form of proposal may be obtained at office of chief clerk, Engineer Department, Room 427 District Bldg.; Cuno H. Rudolph, John A. Johnston, William V. Judson, Commissioners.

Electrical Work.—See "Building Materials."

Elevators.—Dr. F. T. Merriweather, Weaverville, N. C., wants prices on electric and hand elevators for passenger service for three-story hospital.

Engine.—City of Brookhaven, Miss., will receive bids on November 22 for compound condensing high-speed 200 revolutions per minute Corliss valve type engine for direct connection to 200 K. V. A. alternator, steam consumption stated for operating $\frac{1}{2}$, $\frac{3}{4}$, 1, $1\frac{1}{2}$ loads at 90 per cent. P. F., 24-inch vacuum, 140 pounds steam; Chester Byrne, City Clerk.

Engine.—See "Electrical Machinery."

Engines.—Cyrus F. Crosby, Heber Springs, Ark., wants prices on engines.

Engines.—Jellico Cream Co., D. A. Harkness, manager, Jellico, Tenn., wants prices on second-hand 5 or 6 horse-power, also 12 to 15 horse-power, automatic or throttling engines; send particulars.

Engine and Boiler.—Clarence Cosby, Richmond, Va., wants prices on second-hand 8 to 10-horse-power boiler and engine mounted on truck; give full particulars.

Evaporating Machinery.—Berkeley Springs Creamery & Evaporating Co., Berkeley Springs, W. Va., wants prices on evaporating machinery.

Flour-mill Machinery.—T. J. Bentley, Cornelia, Ga., wants to correspond with manufacturers of flour-mill machinery.

Gasoline Engine.—See "Sawmill."

Gasoline Engine.—F. S. Estes, Franklin, Tex., will want two-horse-power air-cooled gasoline engine.

Handkerchiefs.—G. J. Hawes, Cabot, Vt., wants to buy handkerchiefs direct from manufacturers in large quantities.

Heating Equipment.—See "Building Materials."

Heating Plant.—City of Starkville, Miss., H. A. Beattie, Mayor, will receive bids for installation of low-pressure steam-heating plant in school building.

Hoisting Machine.—John MacD. Greene, Drexel Bldg., Philadelphia, Pa., wants two second-hand three-drum hoisting engines with boilers, 25 or 30 horse-power; state full particulars.

Hotel Furniture.—Cyrus F. Crosby, Heber Springs, Ark., wants prices on furniture for \$18,000 hotel.

Quay Wall.—Proposals will be received at Bureau of Yards and Docks, Navy Department, Washington, D. C., until 11 A. M. December 15 for constructing quay wall at naval station, Key West, Fla. Plans and specifications can be obtained on application to bureau or to commandant of naval station named; R. C. Hollyday, chief of bureau.

Lumber.—See "Building Materials."

Lathe.—Bastie Furniture Co., Bastie City, Va., wants second-hand iron lathe, 24 inches to 30 inches by 12 feet.

Lumber.—Ernst Bunge, 124 Boulevard de Strasbourg, Le Havre, France, wants 100,000 quarter-sawn maple strips $1\frac{1}{2} \times 1\frac{1}{2}$ inches by 7 feet 6 inches; prime quality, straight grained, white, and free of knots; also interested in plain and quartered maple lumber.

Lard.—Eduardo Perez de Lara, Apartado 193, Monterey, N. L., Mexico, wants quotations on price, commission, freight rate, terms of sale, etc., on lard.

Maple.—See "Lumber."

Mill Work.—Cyrus F. Crosby, Heber Springs, Ark., wants prices on mill work for \$18,000 hotel.

Mill Work.—W. S. Morehead, Ballinger, Tex., wants prices on mill work.

Oil-fuel Equipment.—Union Central Light & Ice Co., Hubbard City, Tex., will install oil-fuel equipment for steam plant of 250 horse-power.

Paving.—Bids will be received at office of Sam J. Brown, City Secretary, Amarillo, Tex., until 3 P. M. November 21 for construction of 80,000 square yards of pavement; each bidder to bid separately on bitulithic, vitrified brick, sheet asphalt, rock asphalt and crossot pine block paving; each bid to be accompanied by certified check for \$1000, payable to City Treasurer; plans and specifications on file at office of City Secretary, Amarillo, and E. L. Dalton, engineer, Dallas, Tex.; extra copies of specifications to be sent out of town for personal use of bidders may be secured from engineer upon remittance of \$5.

Paving.—J. B. Winslett, City Secretary, Dallas, Tex., receives bids until 3 P. M. November 11 for paving Main St. from Ervay St. to Houston & Texas Central Railroad; each bidder to bid separately on following materials: Bitulithic pavement; rock asphalt pavement; asphaltic concrete pavement; concrete curbs; combination concrete curb and gutter. Will also receive bids until same date for paving Holmes St. from Grand to Pennsylvania Ave., and Grand Ave. from Ervay to Holmes St.; each bidder to bid separately on following materials: Bitulithic pavement; crossot pine blocks; vitrified bricks; rock asphalt pavement; asphaltic concrete pavement; concrete curbs; concrete gutters; combination concrete curb and gutter. Each bid on Main St. paving to be accompanied by certified check for \$500; on Holmes St. paving by certified check for \$500, and on Grand Ave. paving by certified check for \$100; proposals to stipulate time that surface of entire street shall be completed; specifications on file in office of City Secretary.

Paving.—Superintendent and Engineer, Park Department, City Hall, Fort Worth, Tex., invites bids for construction of concrete curbing and sidewalk on Cactus and May Sts., Standpipe Park; specifications on file in park engineer's office; certified check, 10 per cent. of bid.

Paving.—Bob Farman, City Clerk, Oklahoma City, Okla., will receive bids until 5 P. M. November 14 for construction of sidewalk aprons as per detailed lists and specifications on file in offices of sidewalk inspector; certified check for 2 per cent. of bid.

Paving.—Cityco Realty Co., 1291 Calvert Bldg., Baltimore, Md., is receiving bids through Reding & Howard, Hoffman Bldg., 11 East Lexington St., Baltimore, Md., for construction of cement sidewalks in East Sudbrook Park.

Pine-products Plant.—C. T. O'Ferrall, Dillon, S. C., wants names and addresses of manufacturers of machinery for, or contracting builders of, pine-products plants.

Piping.—Eduardo Perez de Lara, Apartado 193, Monterey, N. L., Mexico, wants prices on 800 feet of 12, 14, 16, 18 and 20-inch diameter water piping; pressure, 50 pounds to square inch.

Pumps.—Board of Control, Norfolk, Va., will receive bids until 12:30 P. M. November 19 for design, furnishing and installing three electrically-driven centrifugal pumps at Colley Ave. sewer pumping station; one 2000 gallons per minute pump, one 3000 gallons per minute pump and one 4000 gallons per minute pump; instructions to bidders and specifications may be obtained upon application to City Engineer W. T. Brooke.

Pumps.—Cyrus F. Crosby, Heber Springs, Ark., wants prices on pumps.

Pumping Machinery.—City of Denison, Tex., will receive bids until 8 P. M. November 23 for furnishing f. o. b. Denison necessary pumping machinery to equip proposed pumping station at Shawnee reservoir; plans and specifications on file in City Secre-

tary's office; bids to be addressed to J. D. Tocom, City Secretary Denison, and accompanied by certified check for \$500, payable to order of T. F. Foley, City Treasurer.

Refrigerators.—Cyrus F. Crosby, Heber Springs, Ark., wants prices on refrigerators for hotel.

Road Construction.—Anne Arundel County Commissioners, S. O. Tilghman, clerk, Annapolis, Md., receives bids until noon November 15 for grading and macadamizing road from Shipley Station $1\frac{1}{2}$ miles south, known as Annapolis Rd.; proposals to be made on forms furnished by State Roads Commission, to be obtained through its office in Baltimore, Md.; plans and specifications on file in office of County Commissioners; each bid to be accompanied by certified check for \$200.

Road Construction.—Cityco Realty Co., 1291 Calvert Bldg., Baltimore, Md., will receive bids through Reding & Howard, engineers, Hoffman Bldg., 11 East Lexington St., Baltimore, Md., for construction of two miles of streets and roads near Middle River.

Roofing.—Cyrus F. Crosby, Heber Springs, Ark., wants prices on roofing.

Roofing.—See "Building Materials."

Roofing.—American Tobacco Co., main office 215 Fifth Ave., New York, in market for (immediate delivery) 250 squares composition roofing. Address T. J. Walker, manager, or E. T. Mankin, Merchants' National Bank Bldg., Richmond, Va.

Sawmill.—L. H. Bruce, Elkton, Va., wants second-hand wood saw outfit, including gasoline engine.

Sewer Tiles.—See "Water-works Equipment."

Sewer Construction.—City of Timmonsville, S. C., receives bids until noon December 7 for construction of storm-water drainage system; to include 6000 feet of lateral drains, consisting of brick and concrete and terra-cotta pipe from 12 to 36 inches in diameter, with manholes, catch basins, storm-water inlets, etc.; specifications and blank forms of proposals can be obtained from engineer, J. N. Johnston, Florence, S. C., and full set of plans can be had from him for \$10; plans and specifications may also be seen at office of R. C. Rollins, City Clerk; certified check for 5 per cent. of bid must accompany each proposal; usual rights reserved.

Sewer Construction.—Charles E. Bolling, City Engineer, Richmond, Va., receives bids until 4 P. M. November 16 for construction of certain sewers in different locations in city, approximately 13,000 feet long, varying in diameter from $2\frac{1}{2}$ to $7\frac{1}{2}$ feet, and number of smaller sewers; locations and sizes of sewers and full information furnished upon application to office of City Engineer; bidders are required to examine locations of different sewers; certified check for \$250 to accompany each bid.

Sewer Construction.—J. B. Winslett, City Secretary, Dallas, Tex., receives bids until 3 P. M. November 11 for constructing vitrified pipe and concrete pipe storm sewer on Swiss Ave. between Peak St. and Pacific Ave. according to plans and specifications on file in office of Mr. Winslett; certified check, \$275.

Sewer Interceptor.—Baltimore (Md.) Board of Awards, care of J. Sewell Thomas, City Register, City Hall, will receive bids until 11 A. M. November 16 for constructing McMechen-street Interceptor, sanitary contract No. 58, as shown on plans on file in office of Calvin W. Hendrick, chief engineer of Sewerage Commission; specifications and plans can be obtained upon application at office of Sewerage Commission, 991 American Bldg.; charge of \$5 will be made for each specification and blueprint; certified check for \$1500 to accompany each bid; Peter Leary, Jr., chairman Sewerage Commissioners.

Subway Construction.—Special committee of City Council, "Henry St. Subway," Savannah, Ga., will receive bids until noon December 5 for construction of subway on Henry St. at Atlantic Coast Line Railroad crossing; work will consist mainly of following quantities: 5000 cubic yards earth excavation; 6150 linear feet piles in place; 800 cubic yards concrete in place; 700 square yards sidewalks; 280 linear feet sidewalk hand railing; each bid to be accompanied by certified check for \$500; plans and specifications can be seen at City Engineer's office, and further information desired will be furnished upon application; bids to be addressed to Director of Public Works, Harry Willink Savannah; all proposals to be made upon blanks furnished upon application at office of Director of Public Works.

Steel Work.—Portsmouth Cotton Oil Refining Corporation open for bids on steel work to rebuild burned refinery; Hermann Aspegren, engineer in charge, Portsmouth,

Va.; John Aspegren, president, Produce Exchange Bldg., New York.

Tanks.—Portsmouth Cotton Oil Refining Corporation open for bids on tanks to rebuild burned refinery; Hermann Aspegren, engineer in charge, Portsmouth, Va.; John Aspegren, president, Produce Exchange Bldg., New York.

Tanks.—Climax Heating Co., 619 First National Bank Bldg., Birmingham, Ala., wants prices on small galvanized tanks.

Tanks.—See "Building Materials, etc."

Telephone Machinery.—J. E. Craddock, Asheville, N. C., wants names and addresses of manufacturers of machinery for making telephone pins and brackets.

Toothpick Machinery.—Eddins Manufacturing Co., Gainesville, Fla., wants names and addresses of manufacturers of toothpick machinery.

Type.—Board of Trade, Urban S. Cave, assistant secretary, Suffolk, Va., wants names and addresses of manufacturers of type.

Water Tank.—City of Columbus, Miss., wants prices, etc., on water tank or tower for water-works; capacity not less than 200,000 gallons; E. S. Donnell, Mayor.

Water-works.—City of Timmonsville, S. C., receives bids until noon December 7 for furnishing materials and constructing water-works; require 429 tons cast-iron pipe, 10 tons special castings, 52 fire hydrants, gate valves, valve boxes, etc.; also brick reservoir, pumping station, 100-horse-power boiler, fire-service pump and air compressor, deep well, steel tank and tower and about five miles of 4, 6 and 8-inch pipe; amount to be expended, \$40,000; specifications and blank forms of proposals may be had of J. N. Johnston, engineer, Florence, S. C.; certified check for 5 per cent. amount of bid must accompany each proposal; plans and specifications may also be seen at office of R. C. Rollins, City Clerk; usual rights reserved.

Waterworks Equipment.—John Middleton, president Town Board, Collinsville, Okla., will receive bids until November 17 for purchase of material required in construction of water-works, which will include cast-iron pipe, hydrants and valves, triplex pump and paying brick; also bids will be received for purchase of 2000 feet of 12-inch and 2400 feet of 16-inch salt-glazed sewer tiles; lists of quantities and blank forms for bid can be had by addressing Mayor of Collinsville or O'Neil Engineering Co., 1218 First State Bank Bldg., Oklahoma City.

Water-works.—J. R. Williams, 308 Bank & Trust Bldg., Knoxville, Tenn., wants prices on water plant for town, including two miles of 16-inch water mains.

Wire Cloth.—American Tobacco Co., office, 215 Fifth Ave., New York, in market for (immediate delivery) 30,000 feet 8-inch wire cloth of 1/4-inch mesh and 20,000 feet 36-inch wire cloth of 1/4-inch mesh. Address T. J. Walker, manager, Richmond, Va., or E. T. Mankla, manager, Merchants' National Bank Bldg., Richmond, Va.

Well-drilling.—Tupelo Municipal Plant, W. H. S. John, superintendent, Tupelo, Miss., will at once contract to drill deep well; 1000 to 1500 feet.

Woodworking Machinery.—Diamond Basket Co., 221 West 5th St., Little Rock, Ark., wants prices on 5-foot 6-inch veneering machine, complete with chopper.

Woodworking Machinery.—Creston Hoop Co., Greenville, Miss., wants second-hand steam drag saw and log haul knife grinder for 36-inch knife, and saw sharpening machinery.

Woodworking Machinery.—See "Toothpick Machinery."

Woodworking Machinery, etc.—R. A. Wooten, Dennis Mills, La., wants information, etc., relative to machinery and the manufacture of woodenware products, including strawberry boxes, headings, shoos, etc.

Woodworking Machinery.—J. R. Randolph, Ruston, La., wants prices on small second-hand woodworking tools for carpenter shop.

For Hardwood Plants.

Chamber of Commerce,

Raleigh, N. C., October 25.

Editor Manufacturers Record:

It is found by the Chamber of Commerce and Industry that there is an admirable opening here for plants to manufacture products from hardwood. An examination of the forests in this section shows that extremely little hardwood has ever been used except for crossties for the railways and for fuel, and that the condition of the timber is particularly fine. There is oak of several varieties, hickory, walnut, dogwood, etc. Gum, both black and sweet, is plentiful; so is poplar, these being in the

catalogue of soft woods, but very useful. The timber available for furniture is high class and well located for handling, while prices are very reasonable. The timber is not windshaken or affected by worms.

FRED. A. OLDS,
Secretary.

For a Table Factory.

Greenville, Tenn., October 29.

Editor Manufacturers Record:

Greenville has secured this week the location of a chair factory, paid-in capital \$15,000, to be known as Greenville Chair Manufacturing Co. and operated by F. P. Moor & Sons of Lenoir, N. C. They will erect the plant at once.

The Greenville Furniture Co. of this town has also increased its capital stock from \$15,000 to \$30,000.

This being one of the best hardwood timber sections in the South, we are now anxious for the location of a table factory.

C. AUSTIN.

Plumbers Wanted.

Business League,

Demopolis, Ala., October 25.

Editor Manufacturers Record:

On account of a requirement for all citizens to connect with city sewerage, Demopolis is badly in need of another plumbing company. I consider this the best opening I know of for a plumber.

JESSE B. HEARIN,

Secretary.

FINANCIAL NEWS

The MANUFACTURERS' RECORD invites information about Southern financial matters. Items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

OFFICE MANUFACTURERS RECORD,

Baltimore, Md., November 9.

During the past week the Baltimore stock market was rather quiet. In the trading United Railways common sold at 14 1/2; do. trust certificates, 15; do. incomes, 62 3/4 to 63; do. funding 5s, 84 1/2 to 85; do. do. scrip, 86; United 4s, 84 1/2 to 84 3/4; United Light & Power 4 1/2s, 92; Consolidated Gas, Electric Light & Power preferred, 90; do. 4 1/2s, 83 1/2 to 83 3/4; Consolidated Gas 4 1/2s, 93; Seaboard Company common, 20; Seaboard 4s, stamped, 87 1/2 to 88; do. three-year 5s, 90 7/8; do. 10-year 5s, 92 1/4; Consolidated Cotton Duck common, 5 1/4 to 5 1/2; Mt. Vernon-Woodberry Cotton Duck 5s, 74 to 74 1/4; G. B. S. Brewing firsts, 43 1/2 to 43.

Bank stock sold as follows: Citizens', 40; Mechanics', 28; Third National, 143; Union, 126; First National, 138; Bank of Commerce, 30 1/4; Merchants', 180.

United States Fidelity sold at 144 1/2; Maryland Trust common, 72; Mercantile Trust, 145 to 146 1/2; American Bonding, 78 1/2; Fidelity & Deposit, 150.

Other securities were traded in thus: Fairmont & Clarksburg Trac 5s, 97; Potomac Valley 5s, 107; Norfolk & Portsmouth Trac 5s, 82 1/2 to 83; Houston Oil common, 8 1/2 to 8; do. preferred, 45 to 44; Jamison Coal & Coke, George's Creek 5s, 88 1/2 to 89; Atlantic Coast Line of Connecticut, 235; Consolidation Coal, 111 1/2 to 109 1/2; Anacostia & Potomac 5s, guaranteed, 102 1/2; Fairmont Coal 1st 5s, 95 3/4 to 97 1/4; Baltimore Electric 5s, stamped, 89 to 90 1/4; Chicago Railway 5s, 97 1/2; Maryland Electric 5s, 97 1/4; Somerset Coal 1st 5s, 109 1/4 to 109; Baltimore City 4s, 1957, 100 1/4; do. 3 1/2s, 1980, 87 1/2 to 88; do. 4s, 1954, 100 1/4; Columbia & Greenville 1sts, 106 1/2; Georgia Southern & Florida 5s, 106; German Fire Insurance (Baltimore), 18 3/4; Newport News & Old Point general mortgage 5s, 85 to 83 1/2; Northern Central Railway stock, 125 to 125 1/4; Virginia Electric Railway & Development 5s, 102; Alabama Consolidated Coal & Iron 5s, 75 to 76; Atlantic Coast Line convertible debenture 4s, 97 1/2; Northern Central 5s B, 110 1/4; Savannah, Florida & Western 5s, 110 1/2; Baltimore, Sparrows Point & Chesapeake 4 1/2s, 92 3/4 to 92 1/2; Anacostia & Potomac 5s, 100 1/2; Consolidation Coal (Kentucky) 5s, 103 1/2 to 103 3/4; Detroit Northwestern 4 1/2s, 94 1/2; Georgia & Alabama Consolidated

5s, 104; Atlantic Coast Line Consolidated 4s, 95; Norfolk Railway & Light stock, 22 1/2; Virginia Midland 2d, 100 1/2; Baltimore Brick common, 2 3/4; City & Suburban (Baltimore) 5s, 105 1/4.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended November 9, 1910.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast of Conn.	100	234 1/2	240
Charleston Consolidated	50	31	...
Georgia Sou. & Fla.	100	92	...
Georgia Sou. & Fla. 1st Pfd.	100	92	...
Georgia Sou. & Fla. 2d Pfd.	100	82	...
Norfolk Railway & Light	25	...	24 1/2
Seaboard Company Common	100	20 1/2	...
Seaboard Company 1st Pfd.	100	72 1/2	75
Seaboard Company 2d Pfd.	100	41	43
United Rys. & Elec. Co.	50	14 1/2	14 1/2

Bank Stocks.	Par.	Bid.	Asked.
Citizens'	10	39	40
Commercial & Farmers'	100	75	85
Farmers & Merchants'	40	45	...
First National	100	137	140
Maryland	20	2 1/2	...
Merchants'	100	100 1/2	...
Bank of Baltimore	100	130	131
Howard	10	10	13 1/2
Marine	30	4 1/2	...
Mechanics'	10	27	28
Union	100	125	128
Second National	100	195	215
Third National	100	145	...
Western	20	35	36

Trust, Fidelity and Casualty Stocks.	Par.	Bid.	Asked.
American Bonding	25	78 1/2	...
Baltimore Trust	100	164	165 1/2
Colonial Trust	50	28	30
Fidelity & Deposit	50	150	...
Fidelity Trust	100	202	...
Maryland Trust	100	72	74
Maryland Trust Pfd.	100	301	...
Maryland Casualty	25	95 1/2	96
Mercantile Trust & Deposit	50	145	149
Union Trust	50	70	75
U. S. Fidelity & Guaranty	100	144	144 1/2

Miscellaneous Stocks.	Par.	Bid.	Asked.
Baltimore Brick	100	2 1/2	3
Con. Cotton Duck Common	50	5	5 1/2
Con. Gas, Elec. Lt. & P. Com.	100	62	...
Con. Gas, Elec. Lt. & P. Pfd.	100	90	92
Consolidation Coal	100	108	110
G. B. S. Brewing Co.	100	4	6
Georges Creek Coal	100	5	6
Mer. & Miners' Trans. Co.	100	75	85

Railroad Bonds.	Par.	Bid.	Asked.
Atlantic Coast 1st 4s	100	95	95 1/2
Atlantic Coast Conv. Debent. 4s	100	97 1/2	97 1/2
At. Coast (Conn.) 4s, Cfs.	100	90	...
Atlantic Coast (Conn.) 4s, Cfs.	100	92	...
Balto. & Harrisburg 5s	100	107	...
Balto. & Harrisburg Ext. 5s	100	105	...
Carolina Central 4s	100	91 1/2	92 1/2
Coal & Coke Railway 5s	100	80	...
Coal & Iron Railway 5s	100	105	106 1/2
Col. & Great 1st 6s	100	103 1/2	104
Georgia & Alabama 5s	100	104 1/2	105
Georgia, Car. & North, 1st 5s	100	105 1/2	106 1/2
Georgia South. & Fla. 1st 5s	100	105 1/2	106 1/2
Macon, Dublin & Savannah 5s	100	83 1/2	97
Petersburg Class A 5s	100	110	...
Piedmont & Cumberland 1st 5s	100	99	...
Potomac Valley 1st 5s	100	107	...
Seaboard Air Line 4s	100	86 1/2	87 1/2
Seaboard 4s, Stamped	100	85 1/2	86
Seaboard Adjustment 5s	100	72 1/2	73
Seaboard 10-year 5s	100	99 1/2	100
Seaboard 2-year 5s	100	99 1/2	100
Seaboard & Roanoke 5s	100	106	...
Virginia Midland 2d 6s	100	100 1/2	100 1/2
Washington-Vandemere 4 1/2s	100	92 1/2	93
Western Maryland 4s	100	86 1/2	86 1/2
Western N. C. Con 6s	100	104 1/2	105 1/2
West Virginia Central 1st 6s	100	100 1/2	100 1/2

Street Railway Bonds.	Par.	Bid.	Asked.
Anacostia & Potomac 5s	100	100 1/2	100 1/2
Atlanta Gas 1st 5s	100	104 1/2	105
Balto. City Pass 5s	100	97 1/2	98 1/2
Balto., Sp. Pt. & C. 4 1/2s	100	92	92 1/2
Balto. Trac. 1st 5s	100	106	106 1/2
Charleston Con. Elec. 5s	100	94 1/2	95
Citizens' R. L. & P. of N. C. 5s	100	75	85
City & Suburban 5s (Balto.)	100	105 1/2	106
City & Suburban 5s (Wash.)	100	101 1/2	101 1/2
Fairmont & Clarksburg Trac. 5s	100	97	...
Knoxville Traction 5s	100	103 1/2	105
Lake Roland Elevated 5s	100	108 1/2	...
Lexington Railway 1st 5s	100	85	...
Macon Railway & Light 5s	100	89	...
Maryland Electric Railway 5s	100	97	97 1/2
Memphis Street Railway 5s	100	97	...
Newport News & Old Point 5s	100	93	95
Newport News & O. Pt. G. M. 5s	100	75	83 1/2
Norfolk & Portsmouth Trac. 5s	100	82 1/2	83
United Railways 1st 4s	100	84 1/2	84 1/2
United Railways Inc. 4s	100	82 1/2	83
United Railways Funding 5s	100	84 1/2	85 1/2

Miscellaneous Bonds.	Par.	Bid.	Asked.
Ala. Con. Coal & Iron 5s	100	73 1/2	77
Atlanta Gas 1st 5s	100	101	...
Baltimore Brick 5s	100	77	...
Baltimore Elec. 5s, 8 1/2s	100	89	90 1/2
Consolidated Gas 4 1/2s	100	107 1/2	...
Consolidated Gas 4 1/2s	100	92 1/2	93 1/2
Consolidation Coal Refd. 4 1/2s	100	92 1/2	93 1/2
Con. Gas, Elec. Lt. & P. 4 1/2s	100	83 1/2	84
Con. Gas, Elec. Lt. & P. Notes	100	98 1/2	98 1/2
Fairmont Coal 1st 5s	100	97	97 1/2
G. B. S. Brewing 1st 4s	100	43	45
G. B. S. Brewing Inc. 5s	100	101 1/2	102 1/2
Maryland Steel Co. 5s	100	104	...
Mt. Vernon-Woodberry Cotton Duck 5s	100	74 1/2	74 1/2
United Elec. Lt. & P. 4 1/2s	100	91 1/2	92 1/2

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by William S. Glenn, Broker, Spartanburg, S. C., for Week Ending November 7.

	Par.	Bid.	Asked.
Abbeville Cotton Mills (S. C.)	100	72 1/2	...
Aiken Mfg. Co. (S. C.)	100	...	...
American Spinning Co. (S. C.)	100	...	...
Anderson Cotton Mills (S. C.)	100	...	...
Anderson Cot. Mills (S. C.) Pfd.	100	...	...
Aracadia Mills (S. C.)	100	...	...
Arkwright Cotton Mills (S. C.)	100	103	...
Augusta Factory (Ga.)	60	65	...
Avondale Mills (Ala.)	116	...	...
Belton Mills (S. C.)	100	140	...
Brandon Mills (S. C.)	100	100	...
Brogan Mills (S. C.)	100	90	...
Cannon Mfg. Co. (N. C.)	135	...	...
Cabarrus Cotton Mills (N. C.)	130	135	...

Chadwick Mfg. Co. (N. C.) Pfd.	100	...
Chiquola Mfg. Co. (S. C.)	100	...
Clifton Mfg. Co. (S. C.)	100	...
Clinton Cotton Mills (S. C.)	120	...
Columbus Mfg. Co. (Ga.)	93	98
Courtney Mfg. Co. (S. C.)	100	...
Dallas Mfg. Co. (Ala.)	99	...
Darlington Mfg. Co. (S. C.)	78	82
D. E. Converse Co. (S. C.)	100	...
Drayton Mills (S. C.)	95	105
Eagle & Phenix Mills (Ga.)	117	...
Easley Cotton Mills (S. C.)	175	185
Enoree Mfg. Co. (S. C.)	67	60
Enoree Mfg. Co. (S. C.) Pfd.	95	100
Enterprise Mfg. Co. (Ga.)	80	85
Exposition Cotton Mills (Ga.)	200	...
Gaffney Mfg. Co. (S. C.)	76	...
Gainesville Cotton Mills (Ga.)	76	80
Glenwood Cotton Mills (S. C.)	150	...
Gluck Mills (S. C.)	100	102
Granby Cot. Mills (S. C.) 1st Pfd.	35	45
Granville Mfg. Co. (S. C.)	155	165
Greenwood Cotton Mills (S. C.)	57	60
Grendel Mills (S. C.)	105	110
Hartsaville Cotton Mill (S. C.)	175	...
Henrietta Mills (N. C.)	100	175
Inman Mills (S. C.)	104	108
King Mfg. Co., J. P. (Ga.)	90	93
Lancaster Cotton Mills (S. C.)	130	...
Lancaster Cot. Mills (S. C.) Pfd.	97	100
Langley Mfg. Co. (S. C.)	120	127
Laurens Mills (S. C.)	127	135
Limestone Mills (S. C.)	155	160
Lockhart Mills (S. C.)	76	...
Lockhart Mills (S. C.) Pfd.	99	100
Loray Cotton Mills (N. C.) Pfd.	95	97 1/2
Marlboro Cotton Mills (S. C.)	75	80
Mills Mfg. Co. (S. C.)	102	...
Molton Mfg. Co. (S. C.)	105	110
Monaghan Mills (S. C.)	104	109
Monarch Cotton Mills (S. C.)	104	107
Newberry Cotton Mills (S. C.)	125	130
Ninety-Six Cotton Mills (S. C.)	140	150
Norris Cotton Mills (S. C.)	121	125
Olympia Cotton Mills (S. C.)	80	...
Orr Cotton Mills (S. C.)	105	...
Pacolet Mfg. Co. (S. C.)	101	...
Pacolet Mfg. Co. (S. C.) Pfd.	90	102
Pelzer Mfg. Co. (S. C.)	109	...
Piedmont Mfg. Co. (S. C.)	175	177
Poe Mfg. Co., F. W. (S. C.)	170	180</

SEABOARD AIR LINE RAILWAY

FISCAL YEAR ENDED JUNE 30, 1910.

GENERAL INCOME ACCOUNT RAIL AND WATER LINES FOR YEAR ENDED
JUNE 30, 1910.

	1910.	1909.	Increase.
Gross Revenue.....	\$30,856,573 81	\$18,338,873 81	\$2,517,500 00
Operating Expenses and Taxes.....	14,542,683 48	13,491,263 89	1,051,419 59
Operating Income.....	\$6,313,890 33	\$4,847,609 92	\$1,466,080 41
Other Income.....	137,836 67	127,146 46	10,690 21
Total Income.....	\$6,451,727 00	\$4,974,756 38	\$1,476,970 62
Interest.....	4,254,530 94	4,196,126 53	58,404 41
Rentals and Other Deductions from Income.....	201,752 38	207,905 51	Dec. 6,153 13
Total Deductions.....	\$4,556,273 32	\$4,404,032 04	\$152,241 28
Surplus Income over Charges.....	1,895,453 68	579,724 34	1,315,729 34
Surplus Income Rail Lines.....	1,725,035 33	436,135 29	1,288,900 04
Surplus Income Water Lines.....	169,218 35	134,589 05	34,629 30

MILEAGE OPERATED.

The mileage of the Seaboard Air Line Railway and subsidiary lines in operation on June 30, 1909, was..... 2,986.88
Extensions, etc., constructed during the year..... 30.41

Less branch lines leased..... 1.90

Mileage in operation on June 30, 1910..... 3,015.39

Made up as follows:

MILEAGE OWNED.

Seaboard Air Line Railway and branches..... 2,451.36

LEASED LINES.

Melroim, Ga., to Lyons, Ga..... 57.65

TRACKAGE.

Howells, Ga., to Atlanta, Ga..... 3.00

Hilton, N. C., to Navassa, N. C..... 2.40

In Birmingham, Ala., and vicinity..... 15.11

78.16

DEDUCT.

Amelia Beach branch, leased to Street Railway Company at Fernandina, Fla..... 2.60

Gilson (N. C.) branch, leased to the North & South Carolina Railway..... 10.13

Silver Springs (Fla.) branch, leased to the Ocala Northern Railway..... 1.90

14.63

Total mileage operated June 30, 1910..... 3,015.39

Sidings (including 18.26 miles sidings on Leased Lines and Trackage)..... 695.07

GENERAL BALANCE SHEET, JUNE 30, 1910.

ASSETS.

Road and Equipment:

Road..... \$134,050,800 27

Equipment..... \$15,783,698 53

Equipment Series "I" and "K" (per contra)..... 1,120,000 00

Less: Reserve for Accrued Depreciation..... \$16,903,698 53

General Expenditures..... 797,962 87

Securities:

Securities—Proprietary, Affiliated and Controlled Companies, Pledged:

Stocks..... \$611,861 74

Bonds..... 30,000 00

Securities—Proprietary, Affiliated and Controlled Companies, Unpledged:

Stocks..... \$38,679 33

Bonds..... 173,000 00

Other Investments:

Leased Rail and Material..... 316,897 16

Other Investments—Securities Pledged..... \$1,048,979 15

Unpledged..... 248,300 34

Common Capital Stock in Treasury..... \$496,000 00

Preferred Capital Stock in Treasury..... 1,105,900 00

Total..... \$154,350,151 81

Working Assets.

Cash with Treasurer and Cashier..... \$505,042 45

Cash in Transit..... 325,721 49

Cash with Fiscal Agencies..... 789,496 10

Loans and Bills Receivable..... \$1,620,390 04

Traffic and Car Service Balances due from other Companies..... 52,412 94

Net Balances due from Agents and Conductors..... 243,937 84

Due from United States Government..... 318,396 59

Miscellaneous Accounts Receivable..... 49,409 79

Claims Receivable..... 253,374 85

Material and Supplies..... 51,217 28

Other Working Assets..... 1,100,746 09

Total..... \$3,894,675 99

Deferred Debit Items.

Advances to Proprietary, Affiliated and Controlled Companies..... \$195,339 93

Working and Other Advances..... 116,430 26

Insurance paid in advance..... 69,593 33

Unextinguished Discount on Securities..... 6,195,000 00

Special Deposits..... 30,551 89

Cash in Redemption Funds..... 51,871 88

Claims in Suspense..... 245,900 45

Other Deferred Debit Items..... 59,529 92

Total..... \$7,240,315 76

Grand Total..... \$165,385,143 56

LIABILITIES.

Capital Stock:

Common Capital Stock..... \$37,516,000 00

Preferred Capital Stock..... 25,000,000 00

Funded Debt:

S. A. L. Railway First Mortgage Bonds..... \$29,775,000 00

Less: Pledged as Collateral..... 27,000,000 00

Mortgage Bonds Proprietary Companies..... \$42,688,000 00

Less: Pledged..... \$5,023,000 00

Unpledged..... 788,000 00

S. A. L. Railway Refunding Collateral Trust Bonds..... 5,811,000 00

S. A. L. Railway Collateral Trust Bonds (Extended)..... 26,877,000 00

S. A. L. Railway Adjustment Mortgage Bonds..... 10,000,000 00

Less: Bonds held by Trustee..... 4,651,000 00

Equipment Trust Obligations..... \$5,055,000 00

Equipment Trust Certificates Series "I" and "K" (per contra)..... 1,120,000 00

Total..... \$157,976,500 00

Working Liabilities.

Traffic and Car Service Balances due other Companies..... \$318,249 38

Audited Vouchers Unpaid..... 685,445 65

Wages Unpaid..... 652,783 16

Claim Authorities..... 39,311 99

Agents' Traffic Drafts..... 70,156 31

Miscellaneous Accounts Payable..... \$76,078 00

Matured Interest Funded Debt..... 19,457 50

Matured Interest Equipment Trust Obligations..... 54,000 00

Matured Equipment Trust Obligations..... 789,495 50

Other Working Liabilities..... 25,786 44

Total..... \$2,591,441 62

Accrued Liabilities Not Due.

Accrued Interest Funded Debt..... \$493,929 18

Accrued Interest Equipment Trust Obligations..... 32,808 33

Accrued Interest Adjustment Mortgage Bonds..... \$32,650 00

Accrued Taxes..... 344,573 89

Other Accrued Accounts..... 16,143 20

Total..... \$1,639,104 69

Deferred Credit Items.

Operating Reserves..... \$58,129 79

Interchangeable Mileage Tickets..... 137,163 98

Reserve for Outstanding Stock Proprietary Companies..... 112,259 14

Total..... \$267,552 91

Profit and Loss..... \$2,539,574 89

Grand Total..... \$165,385,143 56

EQUIPMENT.

The balance of the equipment undelivered under contracts made by the Receivers was received during this fiscal year as follows:

188 Ventilated Box Cars,

92 Phosphate Cars,

3 Mail and Baggage Cars,

3 Passenger and Baggage Cars,

A new equipment agreement, designated as Series "L," was made and entered into December 15, 1909, for the purchase of:

15 Passenger Locomotives,

5 Switching Locomotives,

1000 Ventilated Box Cars,

25 Stock Cars,

5 Express Cars,

4 Mail and Baggage Cars,

3 Passenger Coaches,

2 Passenger and Baggage Cars,

1 Steam Self-propelling Pile Driver,

2 Steam Wrecking Cranes,

1 Lidgetwood Unloader,

for which \$184,206.55 was paid in cash and equipment trust obligations aggregating \$1,280,000 were issued, dated December 15, 1909, payable in twenty consecutive semi-annual installments of \$8,000 each, bearing interest at the rate of five per cent. per annum. Of this equipment the following were delivered during this fiscal year:

15 Passenger Locomotives,

5 Switching Locomotives,

740 Ventilated Box Cars,

5 Express Cars,

4 Mail and Baggage Cars,

3 Passenger Coaches,

3 Passenger and Baggage Cars,

1 Steam Self-propelling Pile Driver,

2 Steam Wrecking Cranes,

1 Lidgetwood Unloader,

In addition to the above there were purchased and delivered during the year the following:

2 Steam Shovels.

SIDE TRACKS.

30.92 miles of new sidings and extensions of existing sidings were constructed during the year, and there were deducted by removal and changes of old sidings 16.31 miles, making a net increase over previous year of 14.61 miles.

The above does not include sidings on leased lines, which show a net increase over last year of 1.92 miles.

NEW RAIL.

100.18 miles of new 75-pound steel rail were laid in main line track, releasing therefrom 58, 60, 68 and 70-pound worn rail, and there was charged net to operating expenses \$48,102.12, and to Capital Account \$37,423.97.

BALLAST.

During the year 20,251 cubic yards of gravel, stone and slag ballast were put under main line track at a cost of \$132,172.86, of which \$71,600.57 was charged to "Ballast" and \$60,572.29 direct to "Track Laying and Surfacing," both Capital Accounts.

TRESTLES FILLED.

\$522 feet of wooden trestles were filled in, and of the total cost thereof, \$32,456.84, including culverts, charged to operating expenses.

BRIDGES.

During the year work has been done on 42 bridges, replacing with steel or strengthening for heavy traffic; of these 26 have been completed during the year, and the remaining 16 will be completed by June 30, 1911. Of the above bridges, 9 were authorized during this year, of which 4 have been completed.

Of the bridges completed as stated the principal ones are:

Lift bridge to Grassy Island, Tampa, Fla..... Length, 185 feet.

Southern Railway Underpass, Lincoln Street, Columbia, S. C..... 257 "

Neuse River Bridge, near Neuse, N. C..... 290 "

Deep River Bridge, near Monroeville, N. C..... 255 "

Meherrin River Bridge, near Branchville, Va..... 160 "

Cedar Creek Bridge, near Franklinton, N. C..... 530 "

Savannah River Bridge, near Calhoun Falls, S. C..... 1080 "

Tar River Bridge, near Franklinton, N. C..... 835 "

The cost of bridge work was \$588,224.22, of which there was charged \$408,787.14 to Capital Account and \$179,437.08 to operating expenses.

NEW EXTENSIONS.

Extensions to the Company's line in Florida have been completed during the year as follows:

Various extensions in the sections served by the Starke-Wannee Branch, aggregating 10.51 miles.

From Early Bird to Dunnellon (including 3.25 miles of road purchased), 18.29 miles.

There has also been practically completed an extension from Edison Junction, on the line formerly of the Plant City, Arcadia & Gulf Railway, to McIlhenny and Agricola, 12.34 miles, at which points are located plants of the Armour and Swift Companies.

There are also under construction extensions which will be completed during the ensuing fiscal year from Dunnellon southward to the vicinity of Hernando, approximately 15.5 miles, and from Nichols, on the line formerly of the Plant City, Arcadia & Gulf Railway, to Mulberry, 6.50 miles.

The above extensions are for the purpose of reaching phosphate districts, in order to secure tonnage not heretofore received by your line.

Construction has also been commenced on an extension from Fruitville, on the line formerly of the Florida West Shore Railway, to Venice, of approximately 18 miles.

[Continued from Page 70.]

Washington Mills (Va.).....	28	...
Washington Mills (Va.) Pfd.....	106	110
Whitney Mfg. Co. (S. C.).....	129	125
Williamson Mills (S. C.).....	129	...
Wisconsin Mills (N. C.).....	129	135
Woodcraft Cotton Mills (S. C.).....	129	125
Woodside Cotton Mills (S. C.).....	104½	...
Woodside Cot. Mills (S. C.) Pfd.....	98	100

FINANCIAL CORPORATIONS.

Ala., Birmingham.—The Alabama Insurance Co. of Birmingham, a mutual aid concern, is incorporated with \$25,000 authorized capital, of which \$8500 is reported paid. A. D. Smith is president and J. B. Hamill secretary; S. J. Ansley, H. H. Whitman and E. T. Baird also directors.

Ala., Leeds.—The Leeds State Bank is incorporated, capital \$25,000, of which all is reported paid in. There are 24 incorporators, residents of Leeds, Odenville, Woodlawn and Birmingham, Ala.; Sparta, Ga., and Charleston, S. C. Officers: A. J. Abercrombie, first vice-president; J. W. Atkins, second vice-president; E. R. Perdue, cashier; John D. Walker, financial agent; P. C. Lunden is president.

Ark., Peach Orchard.—Official: The People's Bank chartered; capital \$25,000; John C. Baker, president, and Abe Brown, vice-president. Business is expected to begin in about 10 days.

D. C., Washington.—The Federal National Bank of Washington has made application to organize; capital \$250,000; organizers, W. E. Fowler, W. Sands, A. E. Randle, W. J. Lambert and M. A. Winter.

D. C., Washington.—The Washington National Life Insurance Co. is reported incorporated; capital \$100,000. J. Grier Long is president and B. C. Barrington secretary and general manager.

Ga., Athens.—The Georgia Insurance Corporation, it is reported, is being organized in Athens by F. T. Patterson, D. Wurtzberger and others to conduct a life, accident, fidelity, casualty and bonding business.

Ga., Gainesville.—Petition is filed to charter the Home Investment Co. of this (Hall) county by Samuel C. Dunlap of Hall county and A. M. Kitchen of Habersham county, Georgia, and Charles T. McCrimmon of Dade county, Florida; capital \$25,000 to \$200,000.

Ga., Rome.—The Southern Bankers' Assurance Corporation, capital \$100,000, is reported being organized by Spruill Fouché, W. W. Bowie, Barry Wright, G. K. Henshall and D. C. Bryan, all of Floyd county, Georgia.

Ga., Screven.—Reported that the Screven Banking Co. is being organized with \$25,000 capital by John D. Walker and others.

Ga., Warwick.—The Bank of Warwick, recently organized with \$15,000 capital, has elected directors thus: President, L. O. Benton; vice-president, A. J. Goff; directors, L. O. Benton, A. J. Goff, E. L. Hamilton, W. A. Webster, J. L. Story and others. It is said the capital is to be increased to \$25,000.

Ky., Lynn Grove.—The Lynn Grove Bank is reported to have begun business with amended articles of incorporation, having been granted a charter.

Ky., Perryville.—The People's Bank, says a telegram, has begun business; W. C. Kern, president; E. B. Moore, vice-president; E. F. Smith, cashier.

La., Lockport.—The Merchants and Planters' Bank is reported to have begun business.

Md., Baltimore.—The Parkwood Building and Loan Association, recently incorporated, has elected officers thus: Marion G. Dinmore, president; George A. Gyse, vice-president; John T. J. Gallagher, secretary; Sebastian J. Lintz, treasurer, and Joseph W. Clissham, solicitor. The directors also include Louis P. Viesehon, John J. McGlinity, John Murray, Vincent T. O'Connor, Joseph C. McAvoy, Jr., Cornelius Abner, Jr., and Edward J. Hecker.

Md., Baltimore.—The St. Ann's Savings & Loan Association, capital \$20,000, has been organized by Geo. W. Schanberger, John H. Gildenfenny, Francis B. Payne, Harry W. Fox and others.

Mo., St. Louis.—The Central States Life Insurance Co. of St. Louis, Times Bldg., Broadway and Chestnut St., has organized with Howard C. Boone, president; W. D. Vandiver, vice-president and treasurer; A. J. Sears, vice-president; E. R. Denham, secretary; C. Porter Johnson, counsel, and Dr. Henry Jacobson, medical director.

N. C., Spring Hope.—Official: The Spring Hope Insurance & Realty Co. incorporated; authorized capital \$25,000; directors, C. B. Brantley, W. R. Griffin, O. B. Baines, A. C. Yarbrough and N. B. Finch, all of Spring Hope. J. M. Pearson is manager.

Calif., Dill City.—Reported that a bank with \$20,000 is to be organized.

Okla., Kingston.—The First National Bank of Kingston is reported chartered with \$35,000 capital; James R. McKinney, president; G. P. Wheeler, vice-president; W. E. Zinnecker, cashier. This is a conversion of the Marshall County State Bank of Kingston.

Okla., Oklahoma City.—The Oklahoma Home Building & Investment Co., capital \$25,000, is reported chartered by Guy V. Ferguson, D. K. Pope and C. M. Furr.

S. C., Blacksburg.—Official: The People's Bank of Blacksburg, capital \$10,000, has been granted a commission, and books of subscription were opened November 5, with majority of stock already subscribed. Business is expected to begin in near future. Officers not yet elected. W. E. Anderson and others are interested.

S. C., Columbia.—The Co-operative Building & Loan Association of Columbia commissioned with capital stock of \$200,000. F. H. Weston, H. W. Edmunds and Washington Clarke are the petitioners.

S. C., Columbia.—The South Carolina Life Underwriters' Association is reported organized with: President, W. J. Roddey, Rock Hill; vice-president, M. M. Mattison, Anderson; second vice-president, M. G. Womack, Spartanburg; secretary-treasurer, W. O. Hilleman, Columbia; executive committee, G. J. McDowell, chairman; P. H. Hyatt, C. E. Edwards, G. J. Blalock, J. S. Land. It is the purpose of the association to advance the interests of life insurance.

S. C., Columbia.—The Brookland Bank, capital stock \$20,000, is commissioned in New Brookland, a suburb of Columbia. The petitioners for charter are E. W. Shull, F. L. Sandel, P. J. Weissinger and H. Buff.

Tenn., Dover.—The People's Bank & Trust Co. of Dover is reported to have opened for business with \$15,000 capital; Porter Dunlap, president; Charles Banton, vice-president; Logan McElroy, cashier; directors, W. D. Sykes, J. S. Smith, Charles Bruton, C. D. Scarborough, J. W. Rice, J. F. Boswell, Porter Dunlap.

S. C., Easley.—Official: The Easley Building and Loan Association chartered and incorporated; capital \$50,000; W. C. Smith, president and treasurer, Easley; J. M. Geer, vice-president, Greenville, S. C., and H. C. Hagood, secretary, Easley. Business has begun. The new institution is to be run in connection with the Easley Bank.

S. C., Little River.—The Bank of Little River is reported chartered with \$20,000 capital; R. L. Stone, president; J. E. Vereen, vice-president, and J. H. Stone, cashier.

S. C., Winnsboro.—Official: The Merchants and Planters' Bank, capital \$50,000, has been chartered to succeed the Young Men's Savings and Loan Association. Business is expected to begin about January 1, 1911. Directors, T. H. Ketchin, Samuel Lindsay, J. H. Master, L. E. Owens, J. F. Davis, C. A. Stevenson, J. W. Cathcart, A. M. Owens and H. E. Ketchin.

Tenn., Ethridge.—The Farmers and Merchants' Bank of Ethridge chartered with \$10,000 capital; incorporators, E. W. Crews, A. A. Wilds, J. G. Speegle, N. C. Felton, J. B. North, E. C. Massey and Frank Newman.

Tenn., Campbellsville.—The Bank of Campbellsville, capital \$15,000, is reported to have begun business with directors thus: R. N. Hayes, president; F. M. Collins, first vice-president; Winfield Munson, cashier; J. J. Zuccarello, H. A. Yokley, C. L. English, W. R. English, P. H. Yokley, L. E. Paisley, W. R. Rose and H. C. Long.

Tenn., Nashville.—Official: Hermitage Security Co. chartered; capital \$10,000; has begun business. Directors, J. E. Pollock, president; A. P. Foster, secretary; H. B. Clements, treasurer; all at 715-716 Stahlman Bldg.; T. Watson Batts, Bert P. Woodard, C. de Sambre.

Tex., Bandera.—Official: The First State Bank chartered; capital \$25,000. Business began November 1. P. G. Walker will be president, with headquarters at Kerrville. Tex. T. E. W. Dieter and others are interested.

Tex., Como.—The First National Bank of Como has been approved; capital \$40,000; organizers, B. E. Morris of Como, Tex.; J. M. Fleming, R. A. Foster, J. L. Rutherford, W. J. Beck and others.

Tex., Dallas.—The Lone Star Life Insurance Co. of Dallas, capital \$100,000 chartered. Incorporators: S. W. Johnson, president; E. H. R. Green, vice-president; E. M. Beardon, treasurer, and Henry Hamilton, secretary. Other officers, C. A. Keating, also a vice-president; C. C. Slaughter, chairman of the executive board; A. V. Lane, assistant treasurer; Earl C. Johnson, assistant secretary; Dr. J. M. Emery, actuary. The company was granted a license to do business.

Tex., Howland.—The Howland State Bank,

capital \$10,000, is reported incorporated by W. R. Justiss, T. F. Justiss and D. B. Shelton.

Tex., Post City.—Residents of Post City and its vicinity, says a dispatch, are organizing a State bank with \$50,000 capital.

Tex., Powell.—The Powell State Bank, capital \$10,000, is reported incorporated by B. B. Barron, C. Cole and C. S. Bradley and others.

Tex., Troup.—The Guaranty State Bank is reported incorporated with \$10,000 capital by B. C. Dickinson, L. A. Floore and J. P. Scale.

Tex., Winnie.—The Winnie Farmers and Merchants' State Bank, capital \$10,000, is reported organized with directors thus: M. E. Wilson, Minneapolis, Minn., president; L. R. Miller, Anahuac, vice-president; P. F. Dee, Winnie, cashier; August De Zavalla and George Webb of Houston. The new concern will take over the private banking business at Winnie.

Va., Norfolk.—The Virginia National Bank of Norfolk, capital \$500,000, is reported organized with J. W. Hunter, president; John L. Roper, first vice-president; William C. Whittle, second vice-president; Hugh G. Whitehead, cashier; Washington Reed, assistant cashier.

Va., Richmond.—Citizens' Building and Loan Association, No. 14, chartered; capital \$30,000 to \$500,000; A. C. Becker, president; George H. Richardson, vice-president; C. A. Schmidt, secretary; George Sorg, treasurer, all of Richmond. An official letter confirms the above and says that business began November 1.

Va., Walkerton.—A. A. Cralle and W. A. Cuthorn of Tappahannock, Va., are reported to have opened a bank at Walkerton.

NEW SECURITIES.

Ala., Boaz.—Reported voted: \$20,000 of water works bonds.

Ala., Camp Hill.—Official: Date not yet fixed for bids on \$17,000 of 5 per cent. 30-year electric-light-plant bonds voted October 24 and dated October 25; denomination \$500; official in charge, the City Clerk.

Ala., Cullman.—An official letter confirms the report that it is proposed to issue bonds. M. Robertson is Mayor.

Fla., San Augustine.—Reported that on December 15 an election is to be held to vote on \$100,000 of sewerage-system bonds.

Fla., St. Petersburg.—Well, Roth & Co. of Cincinnati, O., are reported to have been awarded \$100,000 of 6 per cent. 30-year improvement bonds at \$310 premium.

Ga., Douglasville.—Official: November 28 an election is to be held to vote on \$20,000 of 5 per cent. 30-year water-works bonds; denomination \$1000. J. R. Hutcherson is Mayor.

Ga., Gainesville.—J. H. Hillsman & Co. have been awarded at par and accrued interest \$100,000 of 4½ per cent. 30-year bonds. R. D. Mitchell is Mayor and Jas. H. White City Clerk.

Ky., Georgetown.—The court of this (Scott) county will receive bids until 2 P. M. December 19 for \$25,000 of 4½ per cent. funding bonds dated January 1, 1911; denomination \$500.

La., Lake Charles.—Preparations are being made, it is reported, to sell \$160,000 of 5 per cent. sewer bonds.

La., Patterson.—An official letter confirms the report that the Interstate Trust & Banking Co. of New Orleans has purchased \$30,000 of 5 per cent. water-works plant bonds; denomination \$1000.

La., St. Francisville.—Official: The parish of West Feliciana is preparing to issue \$22,500 of 6 per cent. 20-year bonds.

Md., Baltimore.—Voted: \$1,000,000 of Jones Falls boulevard, \$1,500,000 of schoolhouse, \$2,000,000 dock completion and \$3,000,000 funding-loan bonds. J. Barry Mahool is Mayor.

Miss., Collins.—Official: Bids will be received until noon November 7 for \$25,000 (total issue to be \$50,000) of 6 per cent. road-improvement bonds, the first of which mature in 10 years; denomination \$500. Election will be November 7. R. Norwood, clerk, Collins, Miss., is in charge.

Mo., Columbia.—A dispatch reports that the \$125,000 of 4½ per cent. water and light bonds have been awarded to the Wm. R. Compton Bond & Mortgage Co. of St. Louis at its bid of \$125,031.25. They mature \$25,000 in five years, \$75,000 in 10 years and \$25,000 in 15 years.

Mo., Mexico.—An official letter confirms report that bond election is to be held November 8. E. H. Carter is County Clerk.

Mo., Sedalia.—An election is to be held in November, it is stated, to vote on \$50,000 of Pierce county jail-building bonds.

Mo., Springfield.—An election is reported called for November 21 in Springfield to vote on \$475,000 of municipal improvement bonds thus: \$100,000 sewer extension, \$100,000 septic tanks, \$100,000 city hall, \$100,000 bridges and \$75,000 fire station and equipment.

N. C., Southport.—Official: Bids will be opened at noon November 16 for \$25,000 of 5 per cent. 20-year good roads bonds of Lockwoods Folly and Town Creek townships in the amounts of \$10,000 and \$15,000, respectively; denomination \$500. C. N. Leonard, chairman County Commissioners, Shallotte, N. C., is the official in charge.

N. C., Southport.—Bids are asked until noon November 15 for \$15,000 of Town Creek township and \$10,000 of Lockwoods Folly township 5 per cent. 20-year Brunswick county good roads bonds; denomination \$100 or more. Address Register of Deeds, Southport. C. N. Leonard is chairman Board of County Commissioners.

N. C., Chadbourn.—Official: Bids will be received until December 6 for \$30,000 of 6 per cent. bonds of Chadbourn Drainage District. Address D. Boughner, chairman Drainage Commissioners.

Okla., Allen.—Reported voted: \$25,000 of 5 per cent. 21-year water-works bonds.

Okla., Checotah.—Reported that all bids received November 1 for the \$10,000 of 6 per cent. 25-year sewer bonds were rejected and new bids are asked until 8 P. M. November 29. Address Ben Huddleston, City Clerk.

Okla., El Reno.—The city hall bonds, reported sold to the Harris Trust & Savings Co. of Chicago, have, it is said, been rejected on account of a technicality.

Okla., Marietta.—Reported voted: Bonds for sewer system.

Okla., Okemah.—Reported that \$20,000 of 6 per cent. 20-year refunding bonds were purchased by R. J. Edwards of Oklahoma City.

Tenn., Jellico.—D. E. Morgan, City Recorder, will, it is reported, receive bids until December 1 for \$90,000 of 6 per cent. 30-year water and sewer bonds; dated January 1, 1911; denomination \$1000.

Okla., Oklahoma City.—The \$135,000 of 5 per cent. 20-year school bonds recently offered are reported sold to Woodlin, McNear & Moore of Chicago at a premium of \$1284 and accrued interest.

Tenn., Jonesboro.—Sale is reported by this (Washington) county of \$150,000 25-year Normal School bonds at par and interest to the Union Savings Bank & Trust Co. of Cincinnati. They are dated November 1, 1909.

Tex., Abilene.—Precinct No. 4 of this (Taylor) county is reported to have defeated its proposed issue of road bonds.

Tex., Amarillo.—Sale announced of \$75,000 of 5 per cent. paving bonds to the N. W. Harris Bank & Trust Co. of New York at par and accrued interest.

Tex., Austin.—The city is reported to have sold \$75,000 of 5 per cent. school-building bonds to Spitzer & Co. of New York at par, less 1 per cent. commission, subject to approval of counsel for the purchasers. A. P. Wooldridge is Mayor.

Tex., Austin.—Official: The State Board of Education has purchased \$1,353,790 of 3 per cent. 40-year bonds issued to refund old bonds during July 1, 1909, and September 1, 1910. Address Governor and State Treasurer; J. W. Stephens, Comptroller.

Tex., Austin.—The Attorney-General has approved the following securities: \$20,000 of common school district No. 77 Caldwell county 5 per cent. 40-year bonds; \$1600 of 5 per cent. 10-year bonds of school district No. 10 of Tom Green county; \$125,000 of 5 per cent. 20-year Galveston City seawall improvement bonds, this being the last of \$225,000; \$2000 district No. 35 and \$3000 of district No. 37 Coleman county common school district 5 per cent. bonds; \$500 of 5 per cent. 10-20-year Titus county common school district No. 23 bonds; \$2000 of 5 per cent. 10-20-year Collin county common school district No. 3 bonds; \$75,000 of 5 per cent. 20-40-year San Saba county courthouse bonds.

Tex., Austin.—The State Board of Education, says a dispatch, has purchased bonds as follows: San Saba Independent School District, \$14,000; San Benito Independent School District, \$5000; Terrell County Common School District, \$5000; McLennan Independent School District, \$4000; Mart Independent School District, \$10,000; Crockett County Common School District, \$5000; Mount Pleasant Independent School District, \$5500.

Tex., Beaumont.—Dispatches say that all bids were rejected for the \$105,000 of 5 per

[For Additional Financial News, See Page 74.]

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